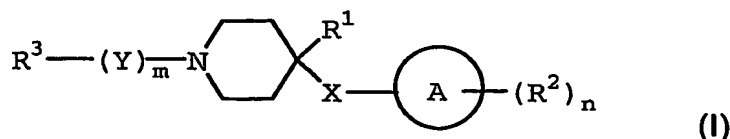


What is Claimed is:

1. A compound of formula (I):



or a pharmaceutically acceptable derivative thereof, wherein:

$R^1$  is alkyl, carbocyclyl, aryl, heterocyclyl, or heteroaryl, wherein said alkyl is optionally substituted by one or more  $R^7$ , said carbocyclyl or heterocyclyl is optionally substituted by one or more  $R^8$  and said aryl or heteroaryl is optionally substituted by one or more  $R^6$ ; or  $R^1$  and X taken together form a saturated, partially saturated or aromatic 5-7 membered ring, having 0-3 heteroatoms chosen from oxygen, sulfur, nitrogen and phosphorus, that is fused to Ring A;

X is a  $C_{1-5}$  alkylene chain, wherein said  $C_{1-5}$  alkylene chain is optionally substituted by one or more groups chosen from  $=O$ ,  $=S$  and halo, and wherein said  $C_{1-5}$  alkylene chain optionally contains 1-3 heteroatoms chosen from oxygen, sulfur, nitrogen and phosphorus;

Ring A is a saturated, partially saturated or aromatic 5-6 membered monocyclic or 8-10 membered bicyclic ring having 0-5 ring heteroatoms chosen from oxygen, sulfur and nitrogen;

each  $R^2$  is independently chosen from  $-OR^0$ ,  $-C(O)R^0$ ,  $-C(O)N(R^0)_2$ ,  $-N(R^0)(-V_m-R^+)$ ,  $-S(O)_2R^0$ ,  $-S(O)_2N(R^0)_2$ ,  $-(CH_2)_a-N(R^0)(-V_b-R^+)$ ,  $-(CH_2)_a(-V_b-R^+)$ , halo, alkyl, aryl, carbocyclyl, heteroaryl and heterocyclyl, wherein said alkyl is optionally substituted by one or more  $R^7$ , said aryl or heteroaryl is optionally substituted by one or more  $R^6$ , and said carbocyclyl or heterocyclyl is optionally substituted by one or more  $R^8$ ; or two adjacent  $R^2$ s on Ring A are optionally taken together to form a fused, saturated, partially saturated or aromatic 4-7 membered ring having 0-3 heteroatoms chosen from oxygen, sulfur, nitrogen and phosphorus; or two geminal  $R^2$ s are optionally taken together to form a spiro, saturated, partially saturated or

aromatic 5-6 membered ring having 0-3 heteroatoms chosen from oxygen, sulfur and nitrogen, said fused or spiro ring being optionally substituted by one or more groups chosen from oxo, alkyl optionally substituted by one or more  $R^7$ , and aryl optionally substituted by one or more  $R^6$ ;

each a is independently 0-3;

each b is independently 0 or 1;

V is alkyl, -C(O)-, -S(O)<sub>2</sub>-, -C(O)O-, or -C(O)-N(R<sup>0</sup>)- (when V is attached to R<sup>+</sup> through the right hand side of the radical;

R<sup>+</sup> is alkyl, aralkyl, aryl, heteroaryl, heteroaralkyl, wherein said alkyl is optionally substituted by one or more  $R^7$  and said aralkyl or aryl is optionally substituted by one or more  $R^6$ ;

m is 0 or 1;

n is 0-5;

R<sup>3</sup> is H, halo, -N(R<sup>0</sup>)<sub>2</sub>, -N(R<sup>0</sup>)C(O)R<sup>0</sup>, -CN, -CF<sub>3</sub>, alkyl optionally substituted by one or more groups chosen from  $R^7$  and -S-aryl optionally substituted by -(CH<sub>2</sub>)<sub>1-6</sub>-N(R<sup>0</sup>)SO<sub>2</sub>(R<sup>0</sup>), carbocyclyl, aryl, heteroaryl or heterocyclyl, wherein said carbocyclyl or heterocyclyl is optionally substituted by one or more  $R^8$ , and said aryl or heteroaryl is optionally substituted by one or more  $R^6$ ;

Y is -(CR<sup>4</sup>R<sup>5</sup>)<sub>p</sub>-, -C(O)-, -C(O)C(O)-, -C(S)-, -O-(CH<sub>2</sub>)<sub>0-4</sub>-C(O)-, -N(R<sup>0</sup>)-C(O)-, -C(O)-N(R<sup>0</sup>)-, -N(R<sup>0</sup>)-C(S)-, -S(O)<sub>t</sub>-, -O-C(=N-CN)-, -O-C(=N-R<sup>0</sup>)-, -S-C(=N-CN)-, -N(R<sup>0</sup>)-C(=N-CN)-, -C(=N-CN)-, -N(R<sup>0</sup>)-C[=N-C(O)-R<sup>0</sup>]-, -N(R<sup>0</sup>)-C[=N-S(O)<sub>t</sub>-R<sup>0</sup>]-, -N(R<sup>0</sup>)-C(=N-OR<sup>0</sup>)-, -N(R<sup>0</sup>)-C(=N-R<sup>0</sup>)-, -C(=N-R<sup>0</sup>)-, -(CH<sub>2</sub>)<sub>0-4</sub>-C(O)-O-, -C(=N-CN)-O-, -C(=N-R<sup>0</sup>)-O-, or -C(=N-CN)-S- when Y is attached to R<sup>3</sup> through the left hand side of the radical;

each R<sup>4</sup> is independently H or alkyl optionally substituted by  $R^7$ ;

each R<sup>5</sup> is independently chosen from H, -C(O)-OR<sup>0</sup>, aryl optionally substituted by  $R^6$ , -C(O)-OR<sup>6</sup>, -C(O)-N(R<sup>0</sup>)<sub>2</sub>, -S(O)<sub>2</sub>-N(R<sup>0</sup>)<sub>2</sub>, -S(O)<sub>2</sub>-R<sup>0</sup>, and heteroaryl optionally substituted by  $R^6$ ;

p is 1-5;

t is 1 or 2;

each  $R^6$  is independently chosen from halo,  $-CF_3$ ,  $-OCF_3$ ,  $-OR^0$ ,  $-SR^0$ ,  $-SCF_3$ ,  $-R^0$ , methylenedioxy, ethylenedioxy,  $-NO_2$ ,  $-CN$ ,  $-N(R^0)_2$ ,  $-NR^0C(O)R^0$ ,  $-NR^0C(O)N(R^0)_2$ ,  $-NR^0C(S)N(R^0)_2$ ,  $-NR^0CO_2R^0$ ,  $-NR^0NR^0C(O)R^0$ ,  $-NR^0NR^0C(O)N(R^0)_2$ ,  $-NR^0NR^0CO_2R^0$ ,  $-C(O)C(O)R^0$ ,  $-C(O)CH_2C(O)R^0$ ,  $-CO_2R^0$ ,  $-O-C(O)R^0$ ,  $-C(O)R^0$ ,  $-C(O)N(R^0)_2$ ,  $-OC(O)N(R^0)_2$ ,  $-S(O)_tR^0$ ,  $-S(O)_t-OR^0$ ,  $-SO_2N(R^0)C(O)R^0$ ,  $-NR^0SO_2N(R^0)_2$ ,  $-NR^0SO_2R^0$ ,  $-C(=S)N(R^0)_2$ ,  $-C(=NH)-N(R^0)_2$ ,  $-C(=N-OR^0)-N(R^0)_2$ ,  $-O-(CH_2)_{0-6}-SO_2N(R^0)_2$ ,  $-(CH_2)_{1-6}NHC(O)R^0$ ,  $-SO_2N(R^0)_2$ ,  $-(CH_2)_{1-6}-OR^0$ ,  $-(CH_2)_{1-6}-SR^0$ ,  $-(CH_2)_{1-6}-CN$ ,  $-(CH_2)_{1-6}-N(R^0)_2$ ,  $-(CH_2)_{1-6}CO_2R^0$ ,  $-C(O)N(R^0)N(R^0)_2$ ,  $-C(O)N(R^0)OH$ ,  $-C(O)N(R^0)SO_2R^0$ ,  $-S(O)_tN(R^0)OR$ , and  $-(CH_2)_{1-6}-C(O)R^0$ , wherein the two  $R^0$ s on the same nitrogen optionally taken together forming a 5-8 membered saturated, partially saturated or aromatic ring having additional 0-4 ring heteroatoms chosen from oxygen, nitrogen, sulfur and phosphorus;

each  $R^7$  is independently chosen from halogen,  $-CF_3$ ,  $-R^0$ ,  $-OR^0$ ,  $-SR^0$ , aryl optionally substituted by  $R^6$ ,  $-NO_2$ ,  $-CN$ ,  $-N(R^0)_2$ ,  $-NR^0C(O)R^0$ ,  $-NR^0C(O)N(R^0)_2$ ,  $-N(R^0)C(S)N(R^0)_2$ ,  $-NR^0CO_2R^0$ ,  $-NR^0NR^0C(O)R^0$ ,  $-NR^0NR^0C(O)N(R^0)_2$ ,  $-NR^0NR^0CO_2R^0$ ,  $-C(O)C(O)R^0$ ,  $-C(O)CH_2C(O)R^0$ ,  $-CO_2R^0$ ,  $-C(O)R^0$ ,  $-C(O)N(R^0)-N(R^0)_2$ ,  $-C(O)N(R^0)_2$ ,  $-C(O)NR^0SO_2R^0$ ,  $-OC(O)N(R^0)_2$ ,  $-S(O)_tR^0$ ,  $-NR^0SO_2N(R^0)_2$ ,  $-NR^0SO_2R^0$ ,  $-C(=S)N(R^0)_2$ ,  $-C(=NH)-N(R^0)_2$ ,  $-(CH_2)_{1-6}-C(O)R^0$ ,  $-SO_2N(R^0)_2$ ,  $-OCF_3$ ,  $-SCF_3$ ,  $-(CH_2)_{1-6}-SR^0$ , methylenedioxy, ethylenedioxy,  $-(CH_2)_{1-6}-CN$ ,  $-(CH_2)_{1-6}-N(R^0)_2$ ,  $-S(O)_tN(R^0)OR^0$ ,  $-(CH_2)_{1-6}-C(O)R^0$ ,  $-C(=N-OR^0)-N(R^0)_2$ ,  $-O-(CH_2)_{0-6}-SO_2N(R^0)_2$ , and  $-(CH_2)_{1-6}-NHC(O)R^0$ , wherein the two  $R^0$ s on the same nitrogen optionally taken together form a 5-8 membered saturated, partially saturated or aromatic ring having additional 0-4 ring heteroatoms chosen from oxygen, nitrogen, sulfur and phosphorous;

each  $R^8$  is independently chosen from  $R^7$ ,  $=O$ ,  $=S$ ,  $=N(R^0)$ , and  $=N(CN)$ ;

each  $R^0$  is independently chosen from  $R^*$ ,  $-C(O)$ -aralkyl,  $-S(O)_t$ -heteroaryl, carbocyclalkyl, aralkyl, heteroaralkyl, and heterocyclalkyl, wherein each member of  $R^0$  except H is optionally substituted by one or more groups chosen from  $R^*$ ,  $-OR^*$ ,  $N(R^*)_2$ ,  $=O$ ,  $=S$ , halo,  $-CF_3$ ,  $-NO_2$ ,  $-CN$ ,

-C(O)R\*, -CO<sub>2</sub>R\*, -C(O)-aryl, -C(O)-heteroaryl, -O-aryl, aralkyl, -S(O)<sub>t</sub>-aryl, -NR\*SO<sub>2</sub>R\*, -NR\*C(O)R\*, -NR\*C(O)N(R\*)<sub>2</sub>, -N(R\*)C(S)N(R\*)<sub>2</sub>, -NR\*CO<sub>2</sub>R\*, -NR\*NR\*C(O)R\*, -NR\*NR\*C(O)N(R\*)<sub>2</sub>, -NR\*NR\*CO<sub>2</sub>R\*, -C(O)C(O)R\*, -C(O)CH<sub>2</sub>C(O)R\*, -C(O)N(R\*)N(R\*)<sub>2</sub>, -C(O)N(R\*)<sub>2</sub>, -C(O)NR\*SO<sub>2</sub>R\*, -OC(O)N(R\*)<sub>2</sub>, -S(O)<sub>t</sub>R\*, -NR\*SO<sub>2</sub>N(R\*)<sub>2</sub>, and -SO<sub>2</sub>N(R\*)<sub>2</sub> wherein the two R\*s on the same nitrogen optionally taken together form a 5-8 membered saturated, partially saturated or aromatic ring having additional 0-4 ring heteroatoms chosen from oxygen, nitrogen, sulfur and phosphorus; and each R\* is independently H, alkyl, cycloalkyl, aryl, heteroaryl, or heterocyclyl.

2. The compound according to claim 1 having one or more of the features selected from the group consisting of:

(a) R<sup>1</sup> is alkyl, aryl, heteroaryl or heterocyclyl, wherein said alkyl is optionally substituted by one or more R<sup>7</sup>, said aryl or heteroaryl is optionally substituted by one or more R<sup>6</sup>, and said heterocyclyl is optionally substituted by one or more R<sup>8</sup>;

(b) X is a C<sub>1-5</sub> alkylene chain optionally substituted by one or more groups chosen from =O and halo;

(c) Ring A is an 8-10 membered bicyclic ring having 0-5 ring heteroatoms chosen from oxygen, sulfur and nitrogen;

(d) R<sup>2</sup> is aryl, heteroaryl or heterocyclyl, wherein said aryl or heteroaryl is optionally substituted by one or more R<sup>6</sup> and said heterocyclyl is optionally substituted by one or more R<sup>8</sup>;

(e) Y is -C(R<sup>0</sup>)[C(O)OR<sup>0</sup>]-, -C(O)-, -O-C(O)-, -N(R<sup>0</sup>)-C(O)-, -S(O)<sub>2</sub>-, -O-C(=N-CN)-, -S-C(=N-CN)-, -N(R<sup>0</sup>)-C(=N-CN)-, -C(=N-CN)-, -N(R<sup>0</sup>)-C(S)-, -N(R<sup>0</sup>)-C(=N-OR<sup>0</sup>)-, -N(R<sup>0</sup>)-C[=N-S(O)<sub>t</sub>-R<sup>0</sup>], -O-C(=N-R<sup>0</sup>)-, -N(R<sup>0</sup>)-C[=N-C(O)-R<sup>0</sup>], -N(R<sup>0</sup>)-C(=N-R<sup>0</sup>)-, or -C(=N-R<sup>0</sup>)-; wherein each R<sup>0</sup> is independently R\* and m is 1; and

(f) R<sup>3</sup> is alkyl, aryl, heteroaryl, heterocyclyl or carbocyclyl, wherein said alkyl is optionally substituted by one or more R<sup>7</sup>, said aryl or

heteroaryl is optionally substituted by one or more  $R^6$ , and said heterocyclyl or carbocyclyl is optionally substituted by one or more  $R^8$ .

3. The compound according to claim 2, wherein:

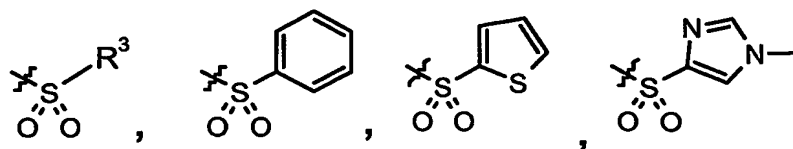
- (a)  $R^1$  is aryl optionally substituted by one or more  $R^6$ ;
- (b) X is a  $C_2$  alkylene chain optionally substituted by one or more groups chosen from =O and halo;
- (c) Ring A is an 8-9 membered bicyclic ring having one ring nitrogen and 0-4 additional ring heteroatoms chosen from oxygen, sulfur and nitrogen;
- (d)  $R^2$  is heteroaryl optionally substituted by one or more  $R_6$ , or heterocyclyl optionally substituted by one or more  $R_8$ ;
- (e) Y is  $-C(R^0)[C(O)OR^0]-$ ,  $-CH(COOH)-$ ,  $-C(O)-$ ,  $-O-C(O)-$ ,  $S(O)_t-$ ,  $-N(R^0)-C(O)-$ ,  $-O-C(=N-CN)-$ , or  $-N(R^0)-C(S)-$ ; wherein each  $R^0$  is independently  $R^*$  and m is 1; and
- (f)  $R^3$  is alkyl optionally substituted by one or more  $R^7$ , aryl or heteroaryl wherein said aryl or heteroaryl is optionally substituted by one or more  $R^6$ .

4. The compound of claim 1 wherein  $R^1$  is optionally substituted aryl.

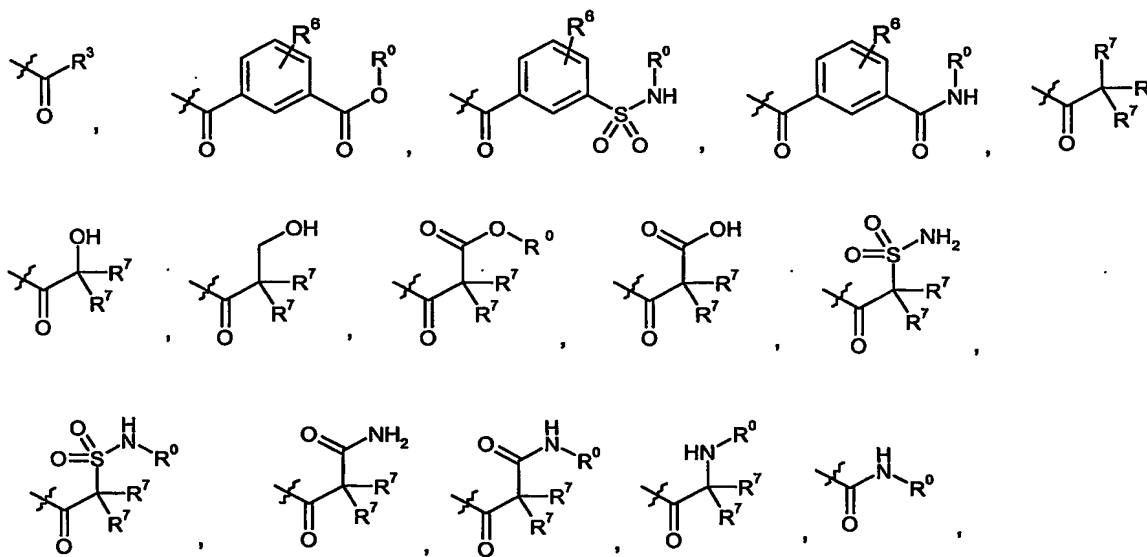
5. The compound of claim 4 wherein  $R^1$  is phenyl mono- or di- substituted with halogen.

6. The compound of claim 5 wherein  $R^1$  is phenyl substituted with F.

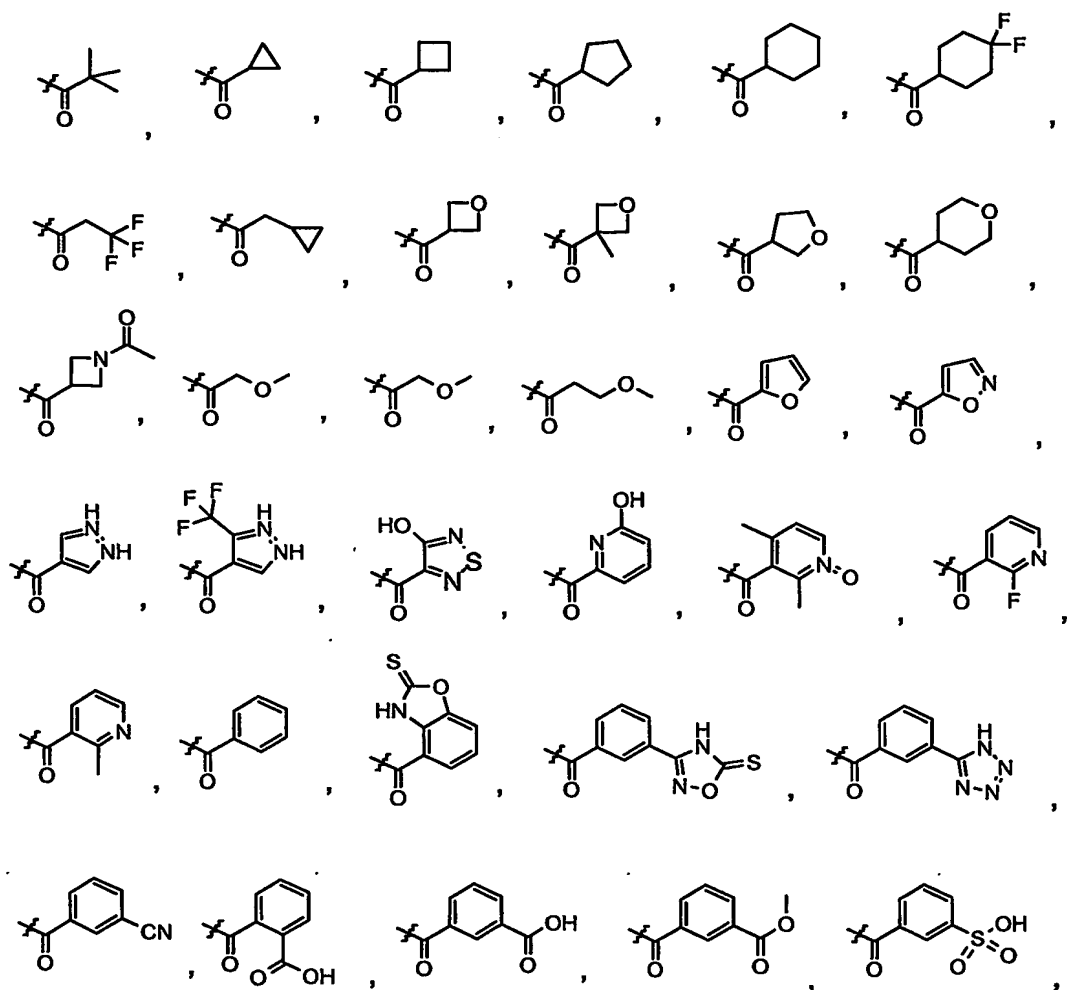
7. The compound of claim 1 wherein m is 1, Y is selected from the group consisting of



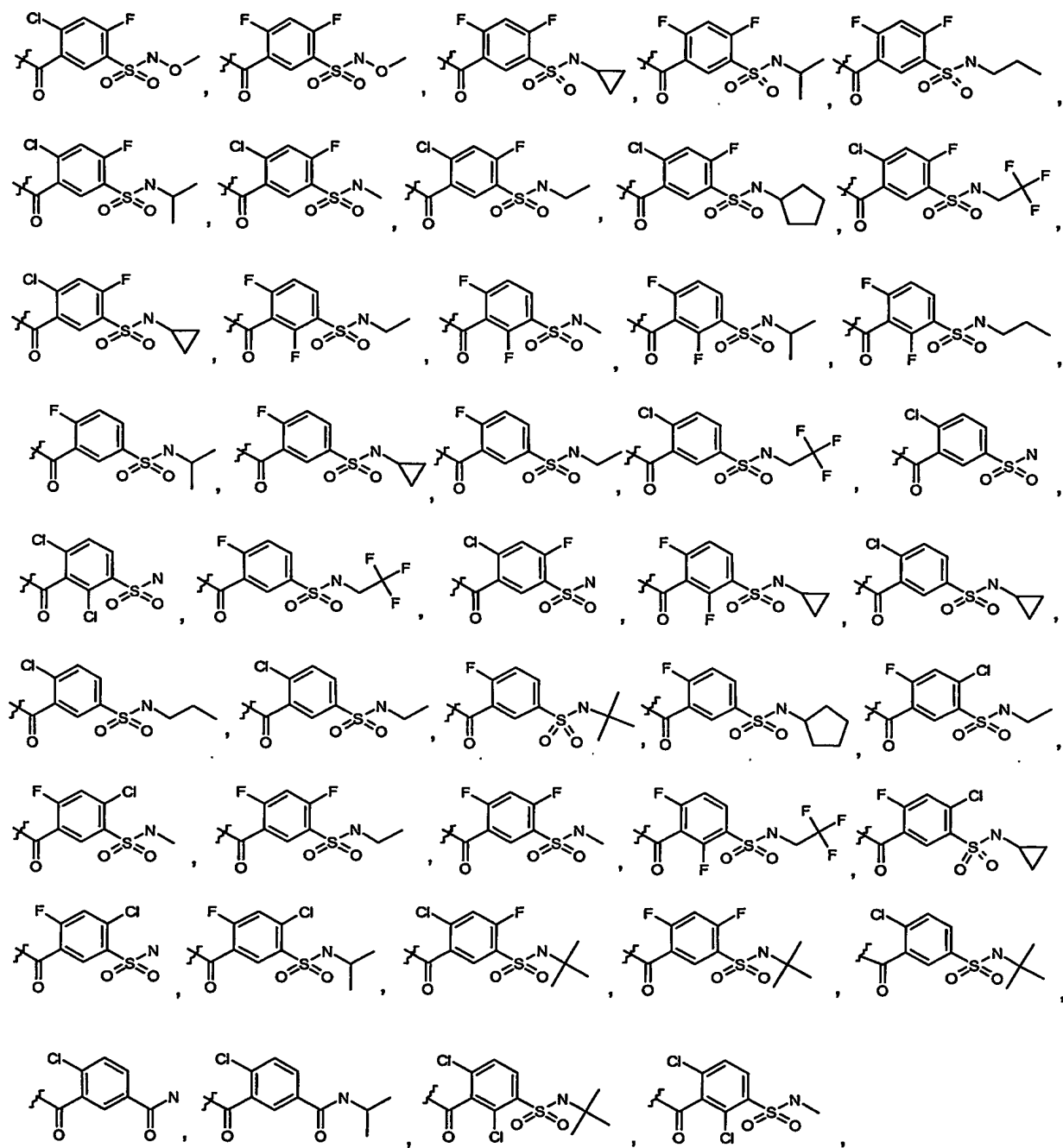
8. The compound of claim 1 wherein m is 1, and Y-R<sup>3</sup> selected from the group consisting of



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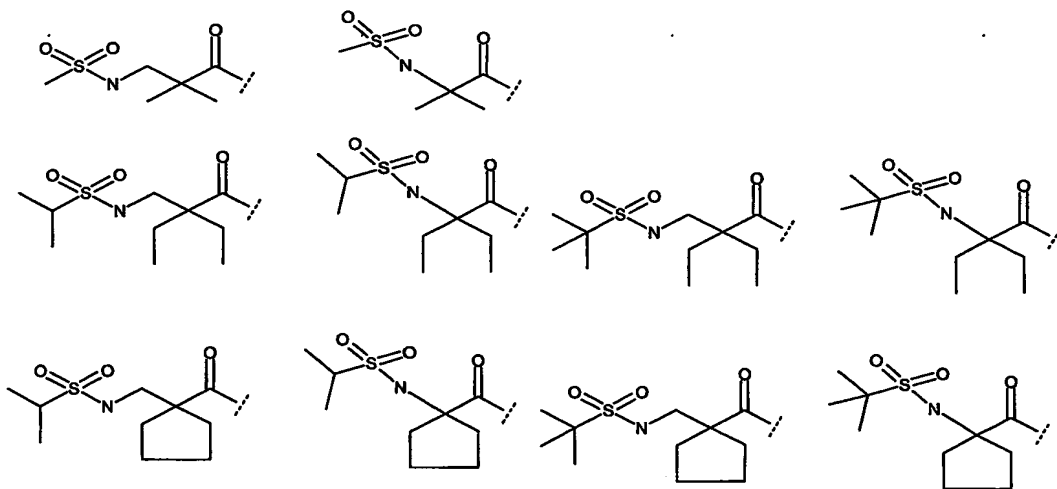
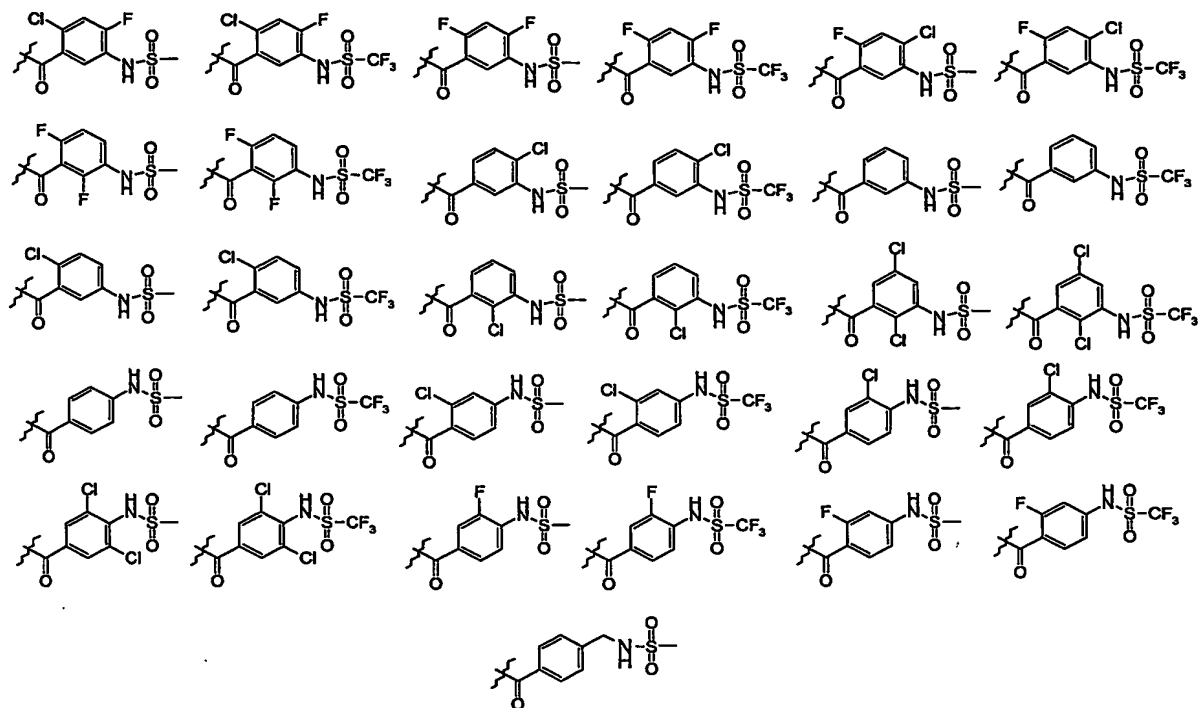


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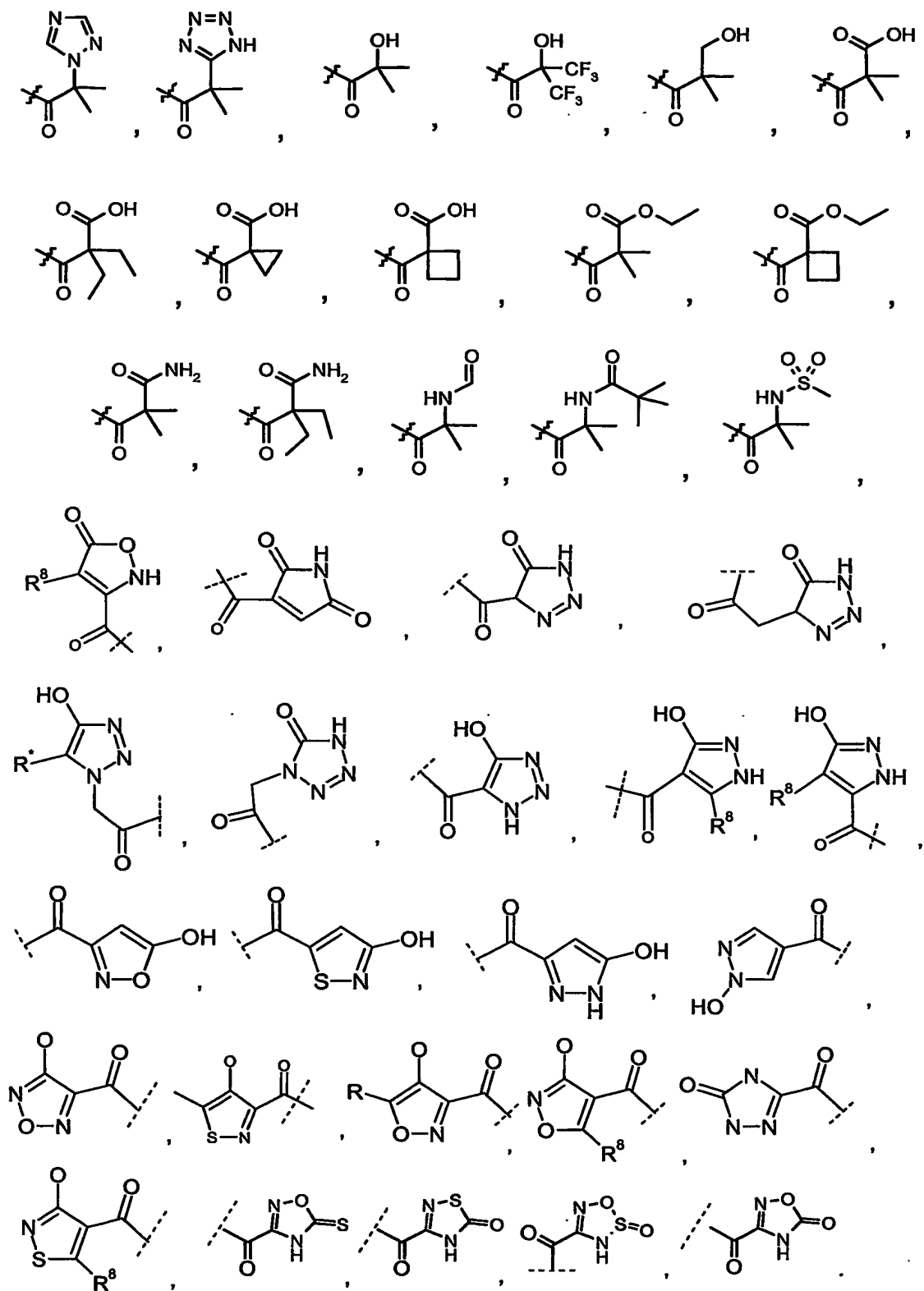




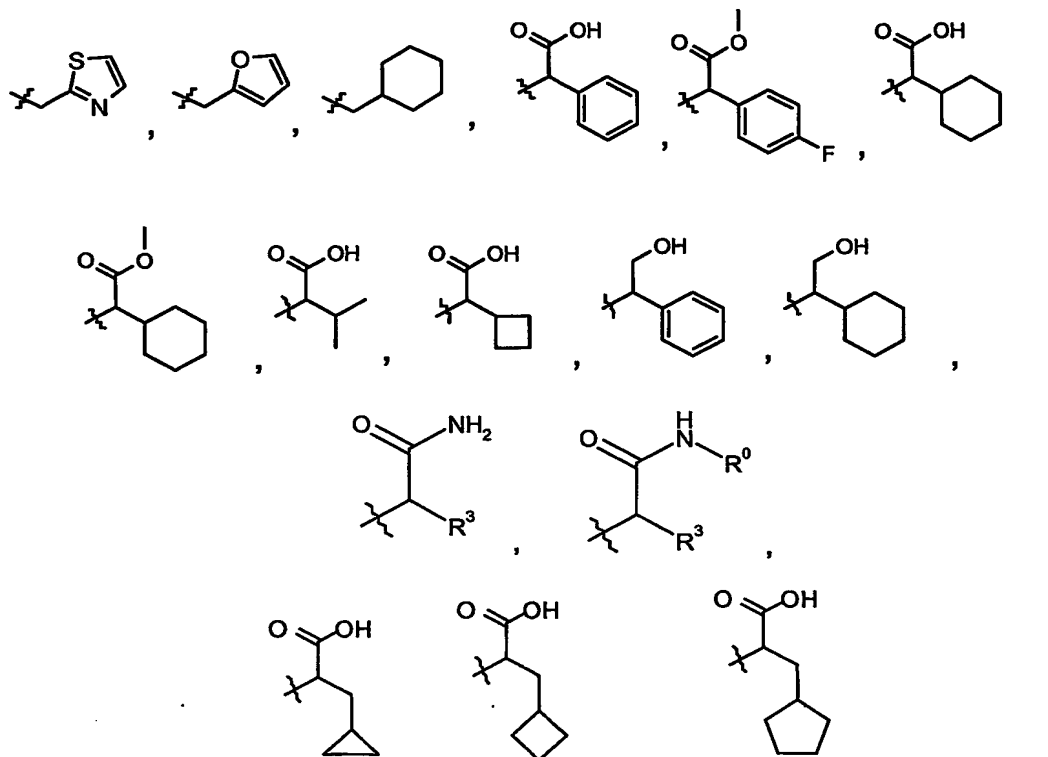
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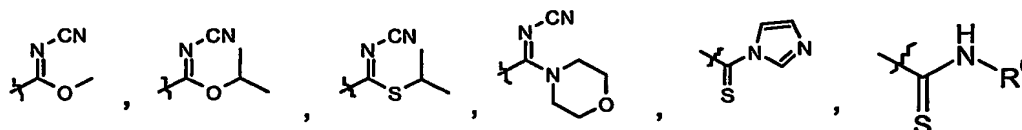


9. The compound of claim 1 wherein m is 1, Y-R<sup>3</sup> is selected from the group consisting of



10. The compound of claim 1 wherein m is 0, R<sup>3</sup> is directly attached to N, and R<sup>3</sup> is optionally substituted aryl, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted heteroaryl, or optionally substituted heterocyclyl.

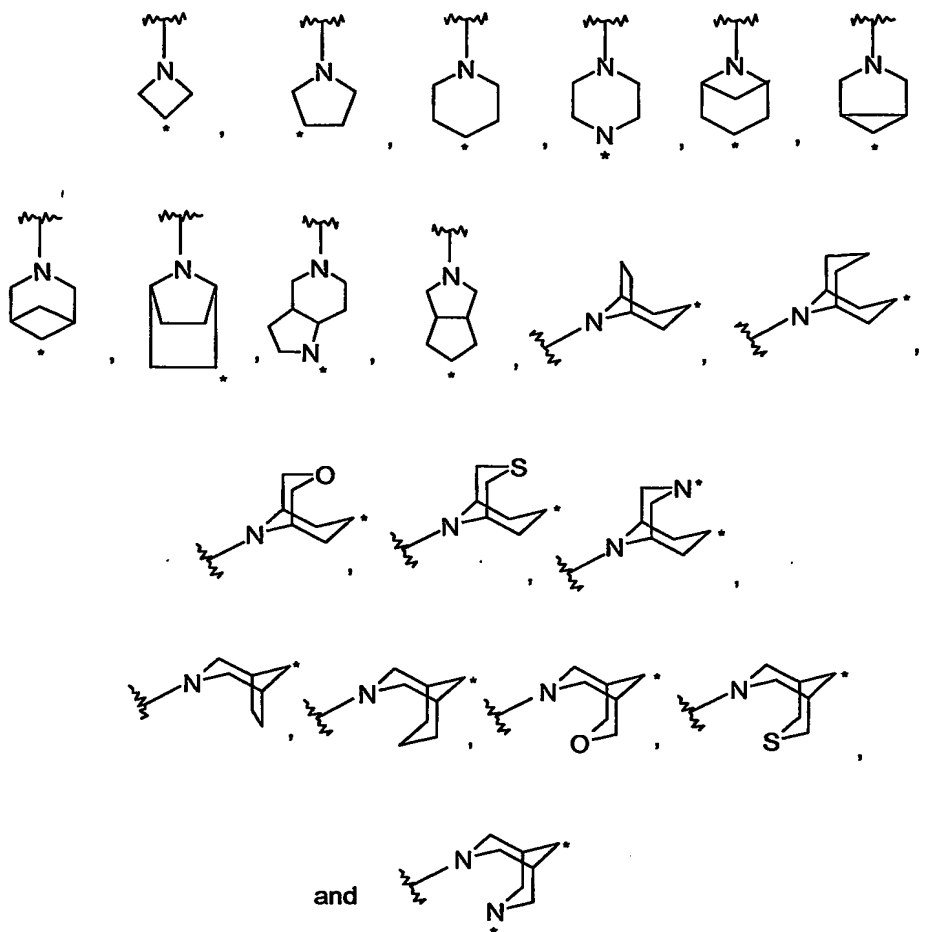
11. The compound of claim 1 wherein m is 1, Y-R<sup>3</sup> is selected from the group consisting of



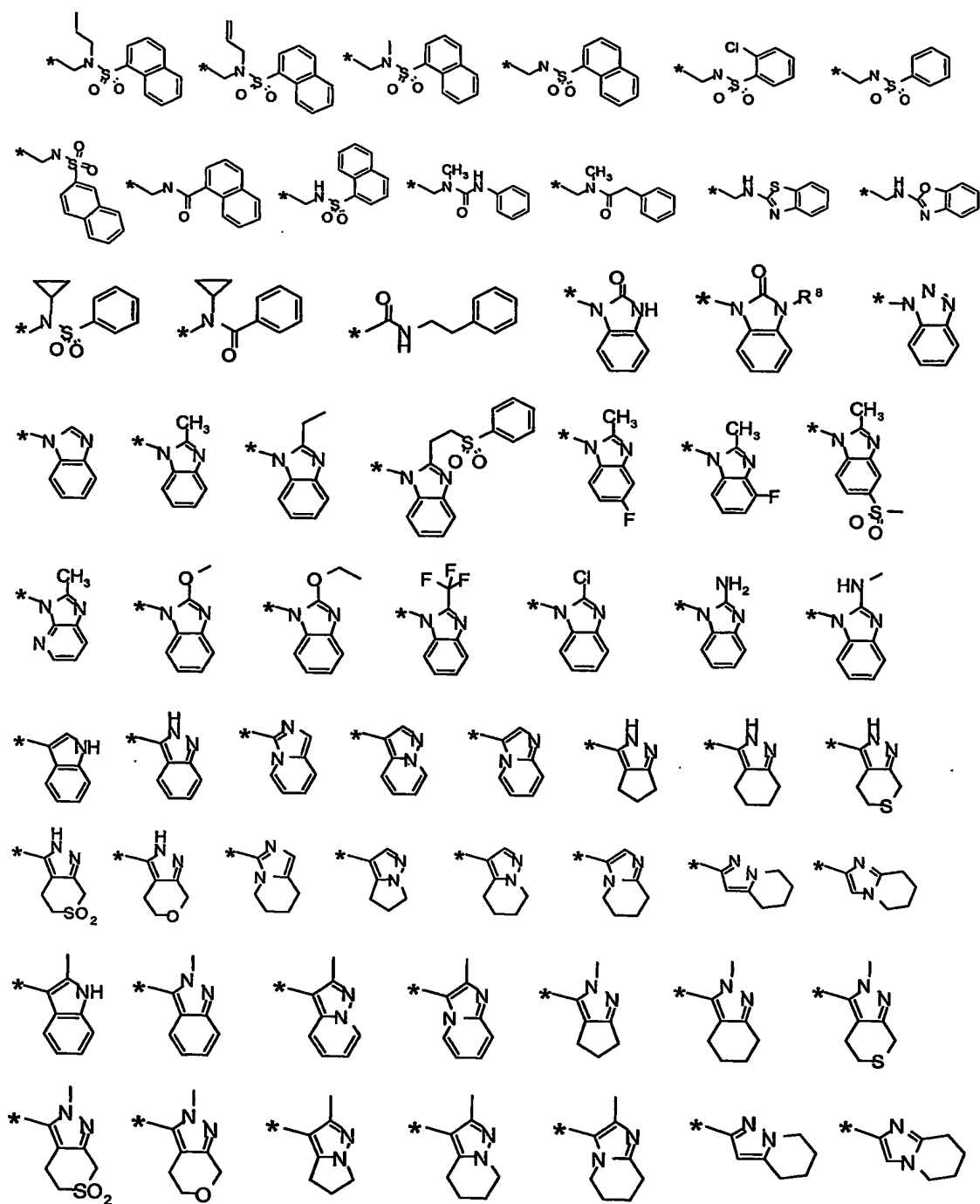
12. The compound of claim 1 wherein m is 1, Y is -C(O)O-, and R<sup>3</sup> is optionally substituted alkyl or optionally substituted aryl.

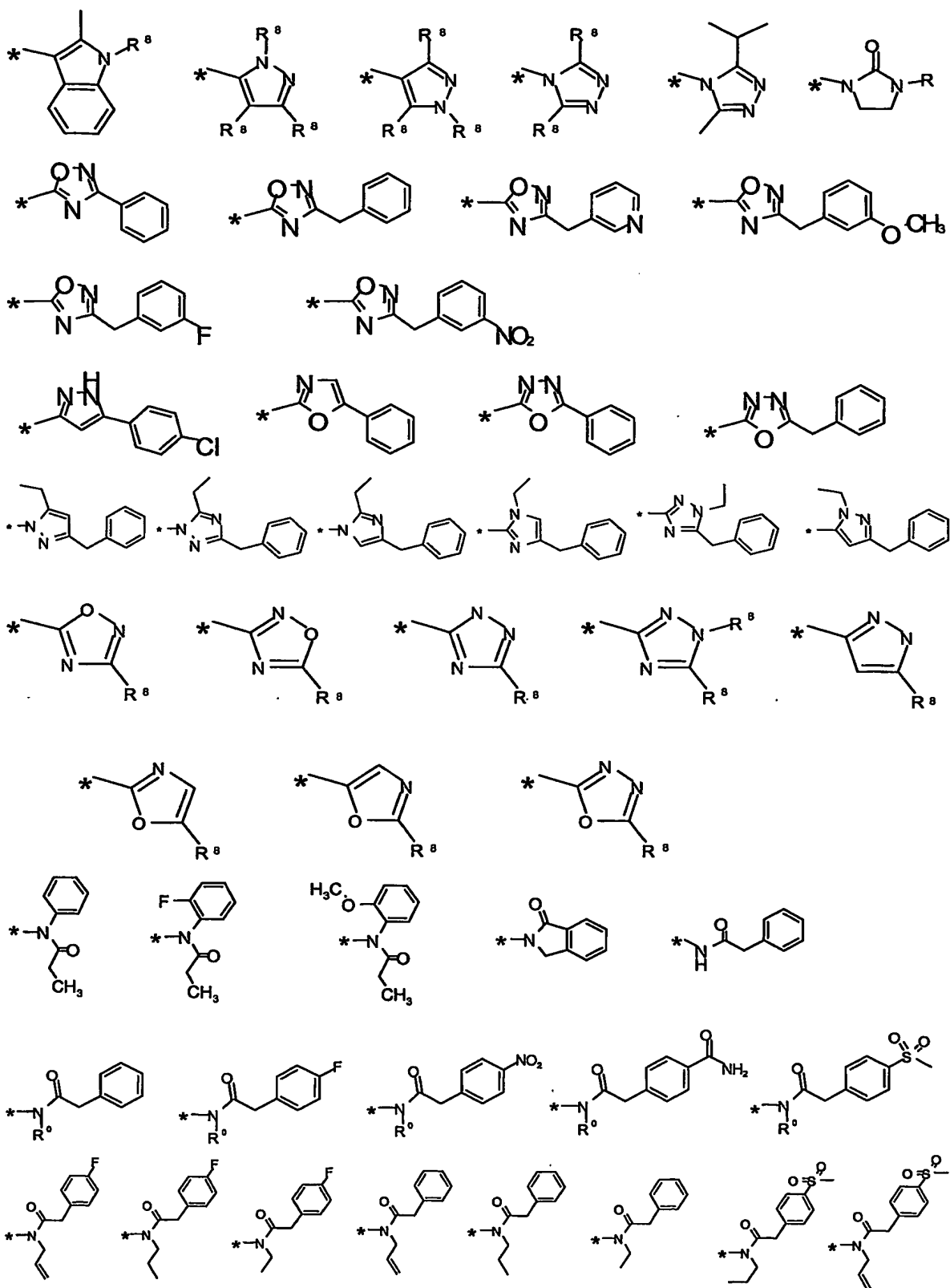
13. The compound of claim 1 where X is  $-(CH_2)-$ ,  $-(CH_2-CH_2)-$ , or  $-(CH_2-CH_2-CH_2)-$ .
14. The compound of claim 13 wherein X is optionally substituted by one or more halogen or oxo.
15. The compound of claim 14 wherein X is disubstituted with halogen.
16. The compound of claim 15 wherein X is disubstituted with fluoro.
17. The compound of claim 16 wherein X is  $-(CF_2-CH_2)-$ .
18. The compound of claim 13 wherein X optionally has 1-3 heteroatoms selected from oxygen, phosphorus, sulfur, and nitrogen.

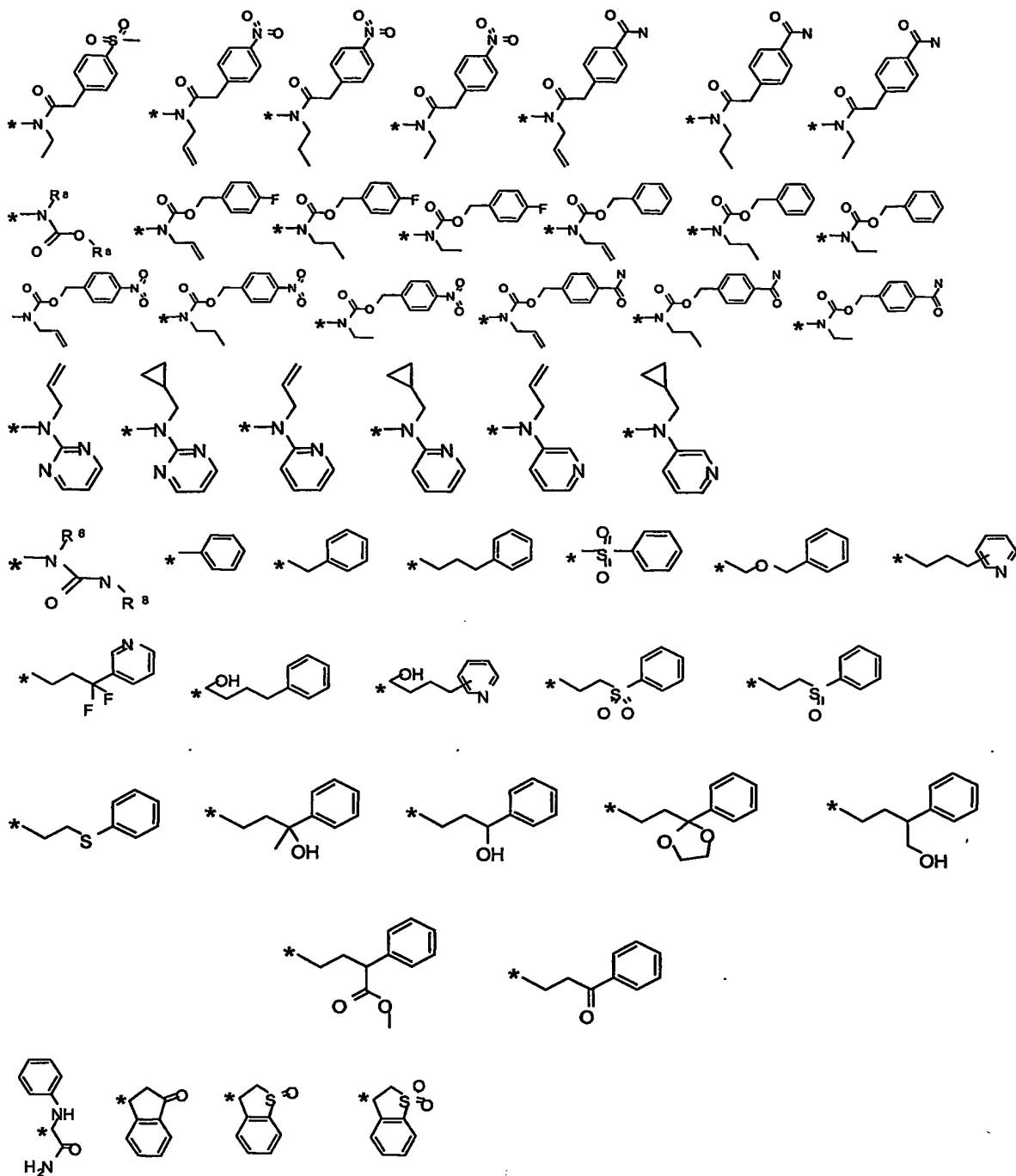
19. The compound of claim 1 wherein the A ring is selected from, where the asterisk (\*) indicates the preferred, but not limiting point(s) of substitution,



20. The compound of claim 1 wherein each  $R^2$ , with an asterisk indicating a point of substitution from ring A, independently is selected from the group consisting of



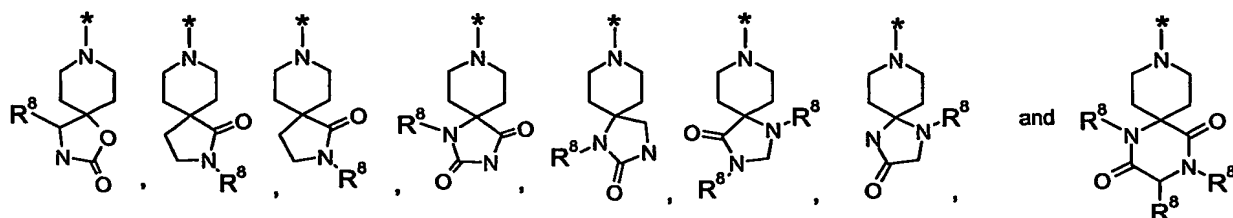




21. The compound of claim 1 wherein the A ring, with two geminal R<sup>2</sup>s, is selected from the group consisting of

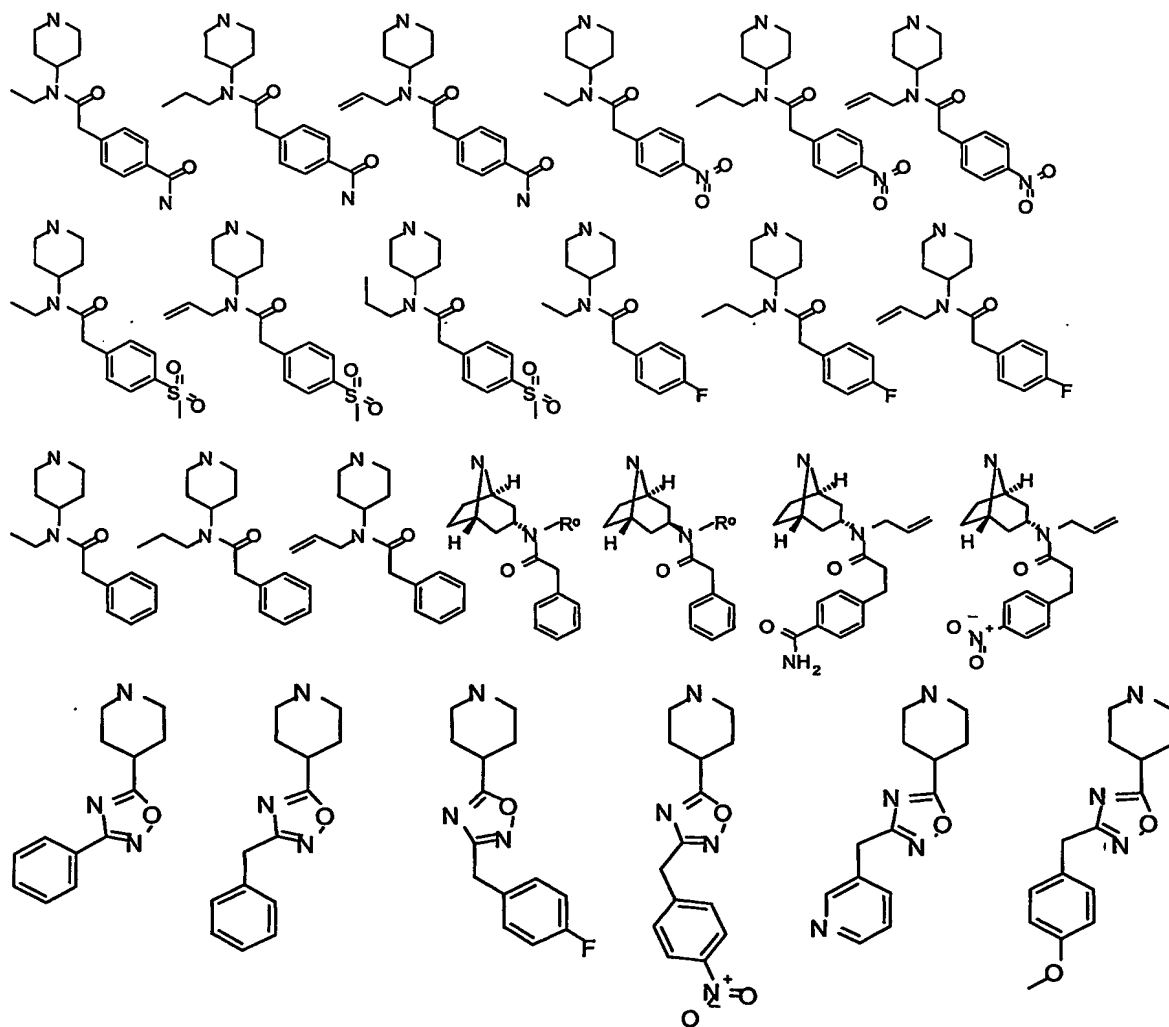


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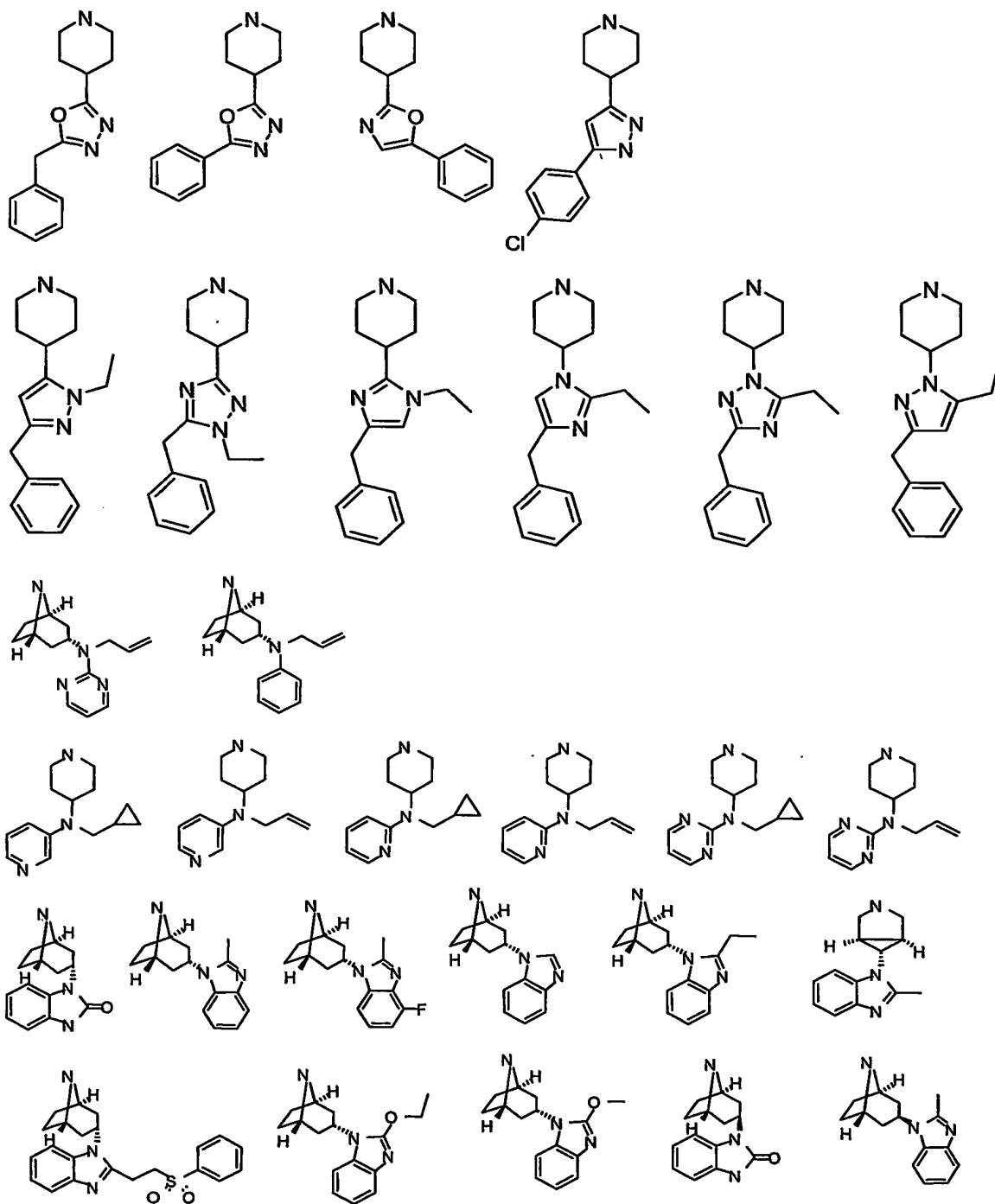


22. The compound of claim 1 wherein the A ring is tropane or piperidine, either optionally substituted with one or more  $R^2$ .

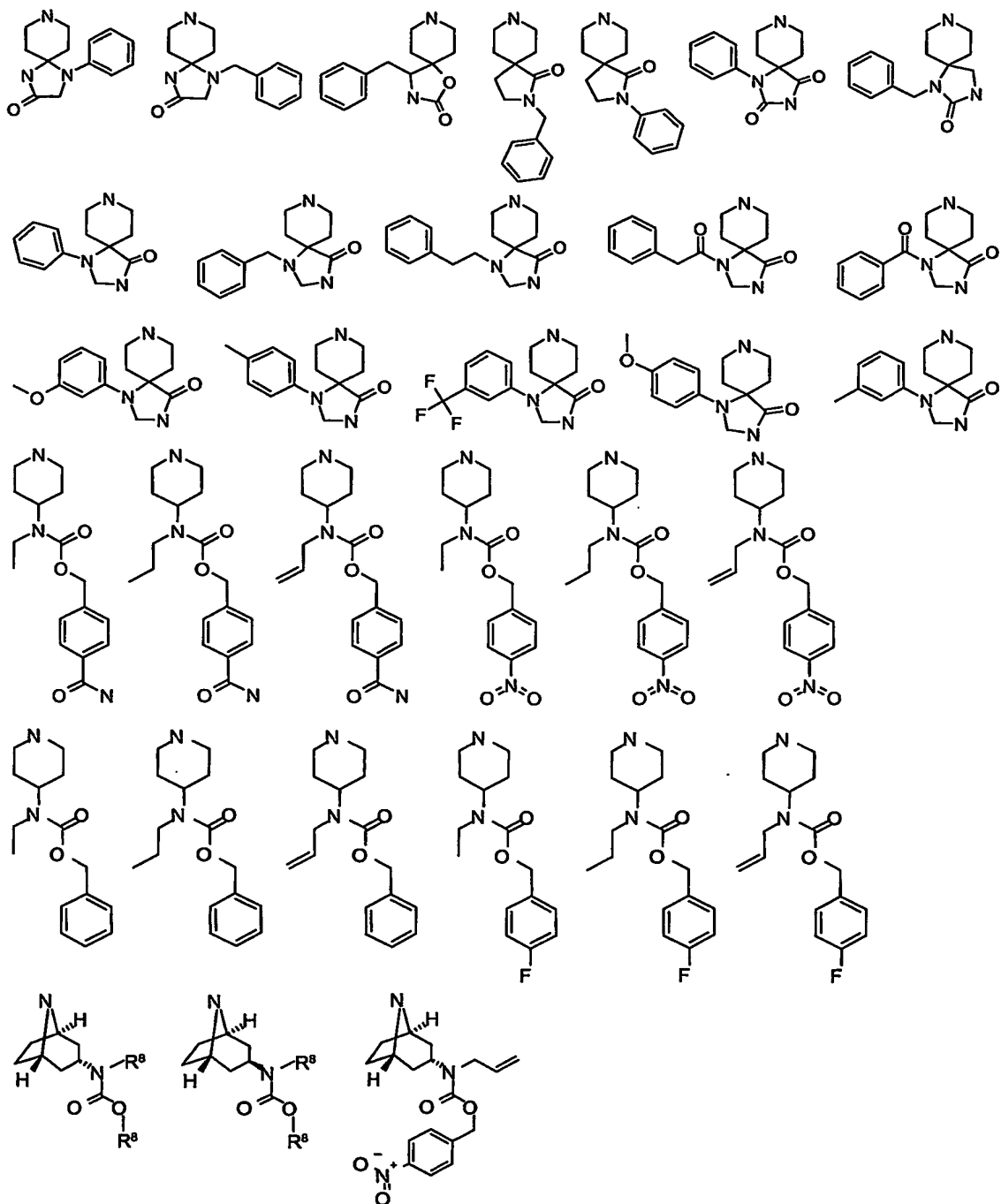
23. The compound of claim 22 wherein the A ring in combination with  $R^2$  is



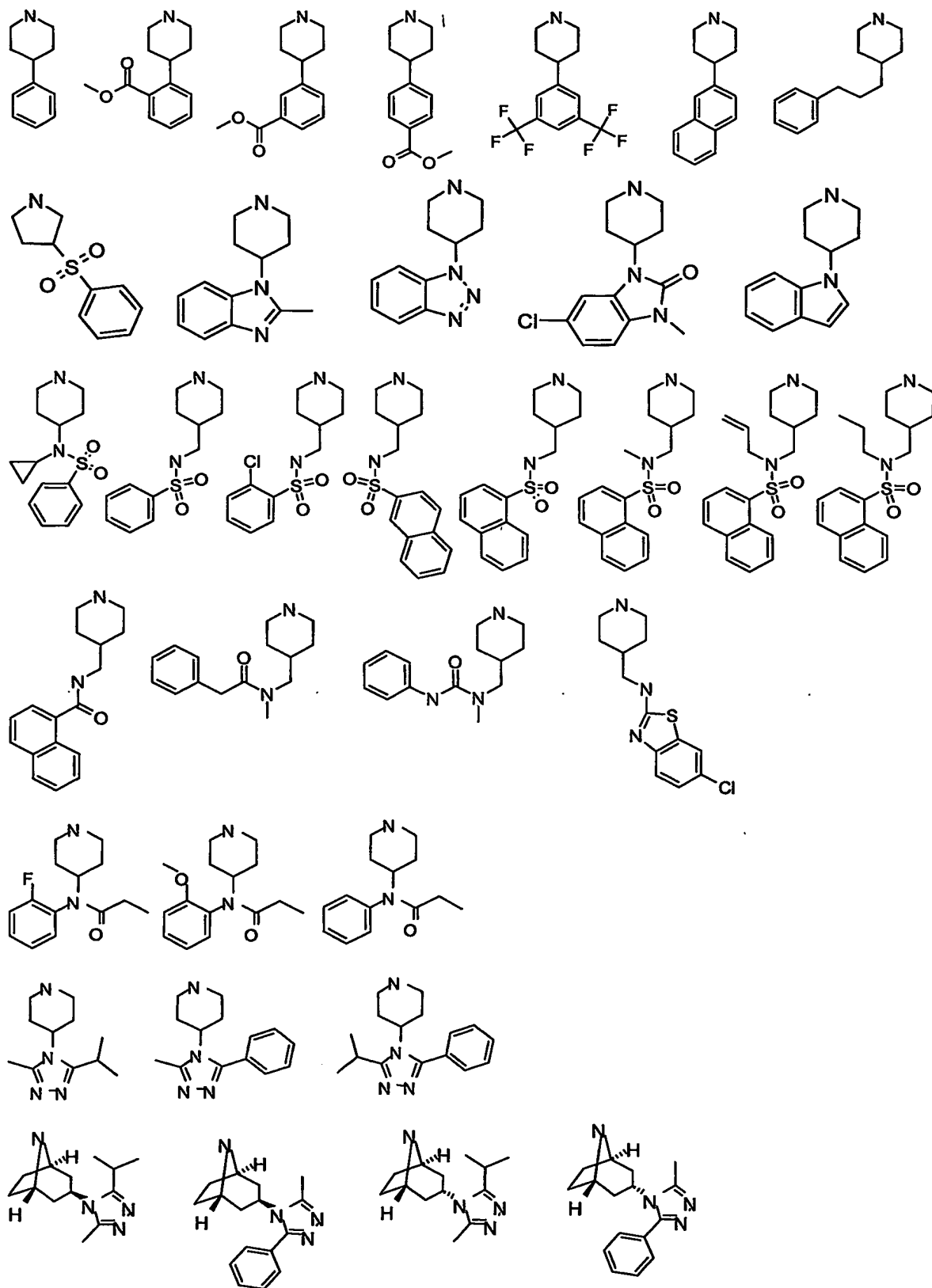
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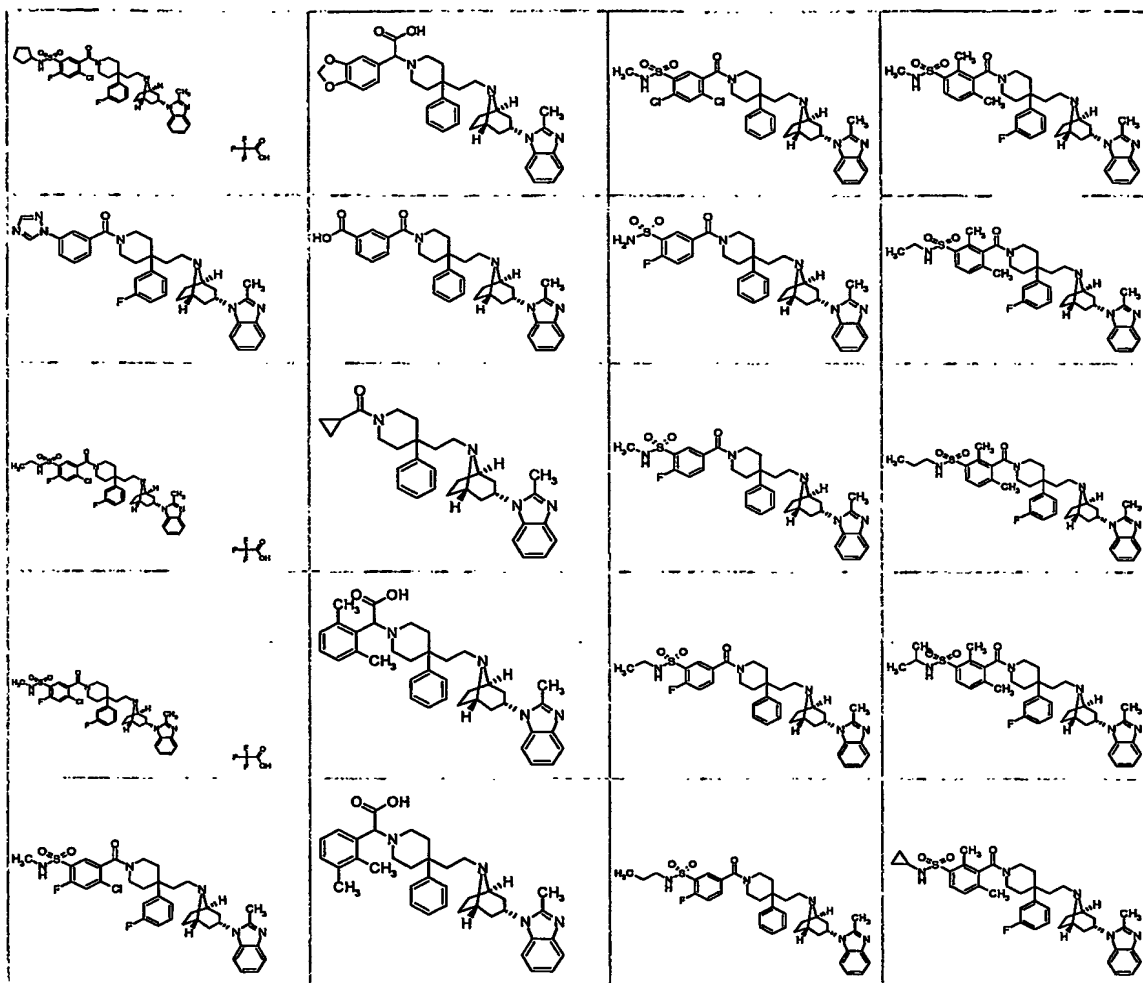
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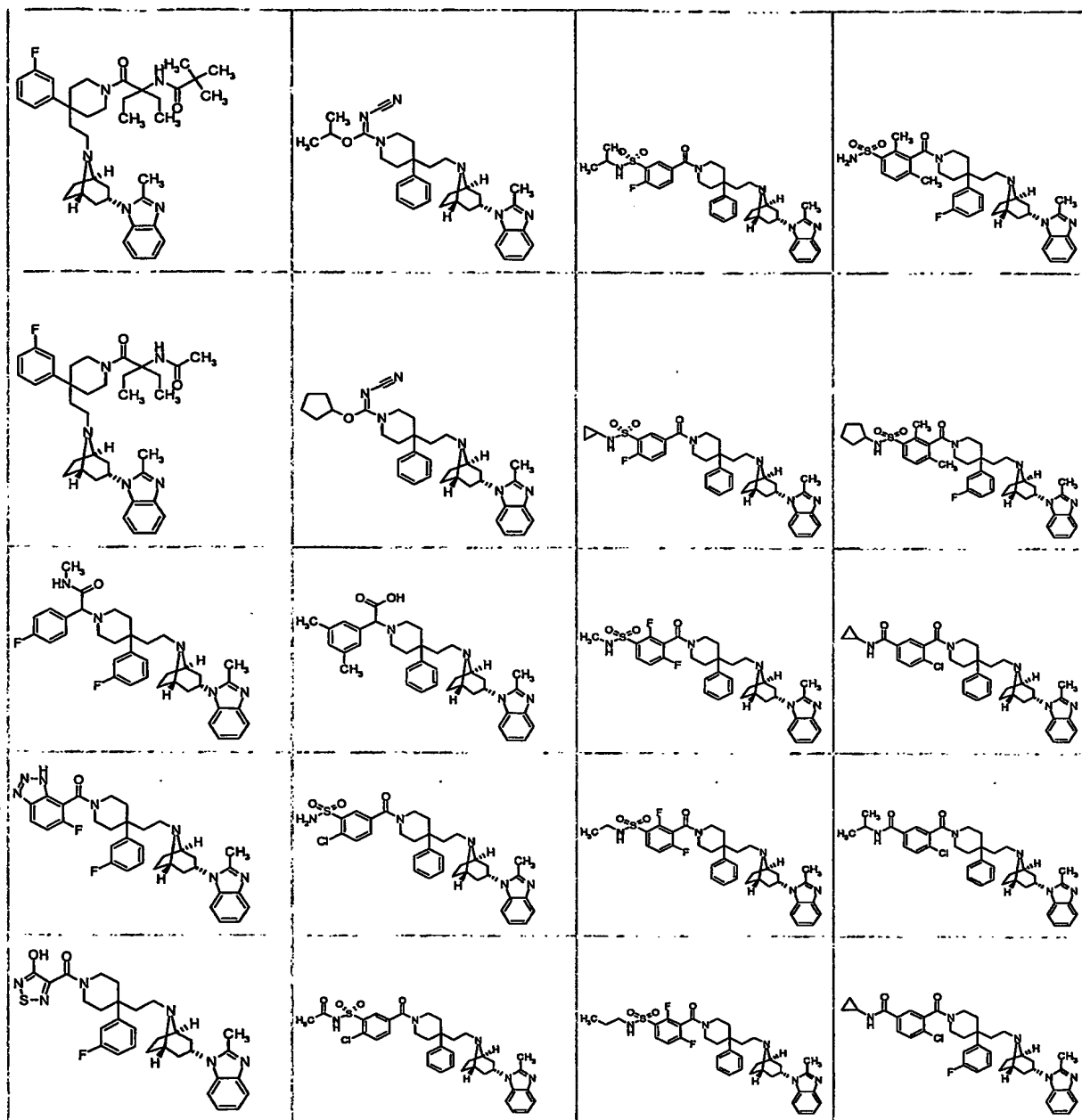


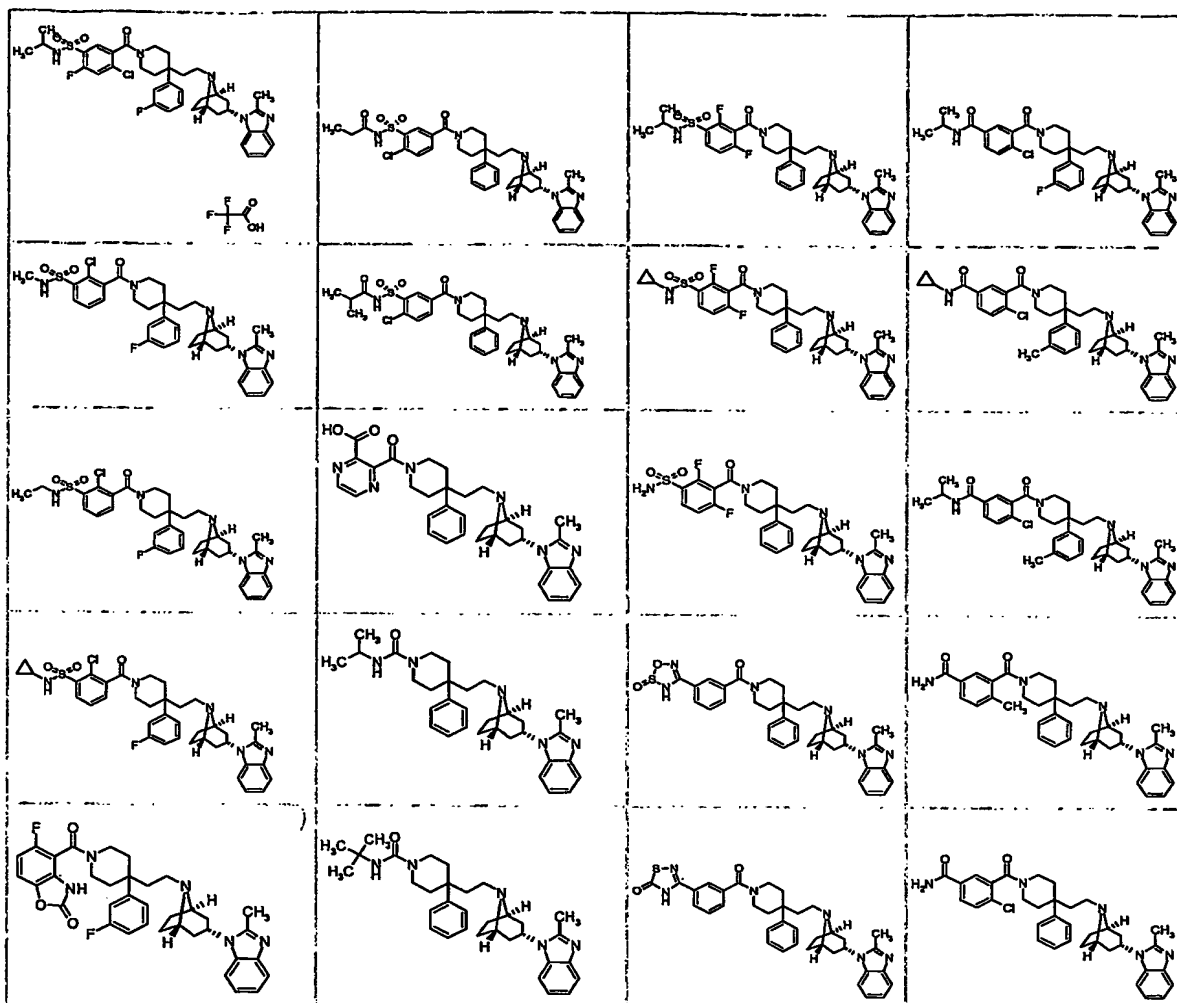
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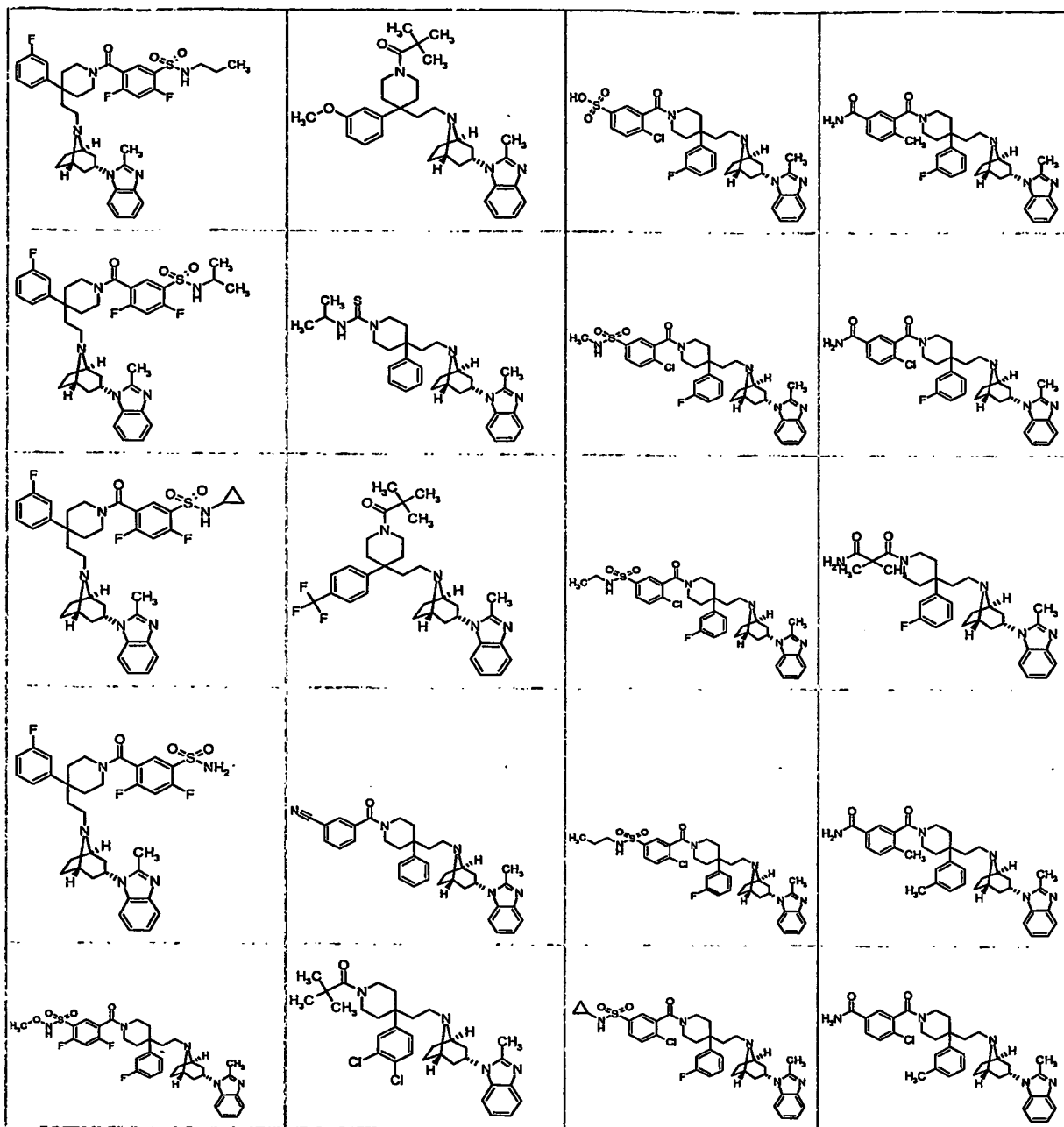


24. The compound according to claim 1 selected from among the group consisting of:

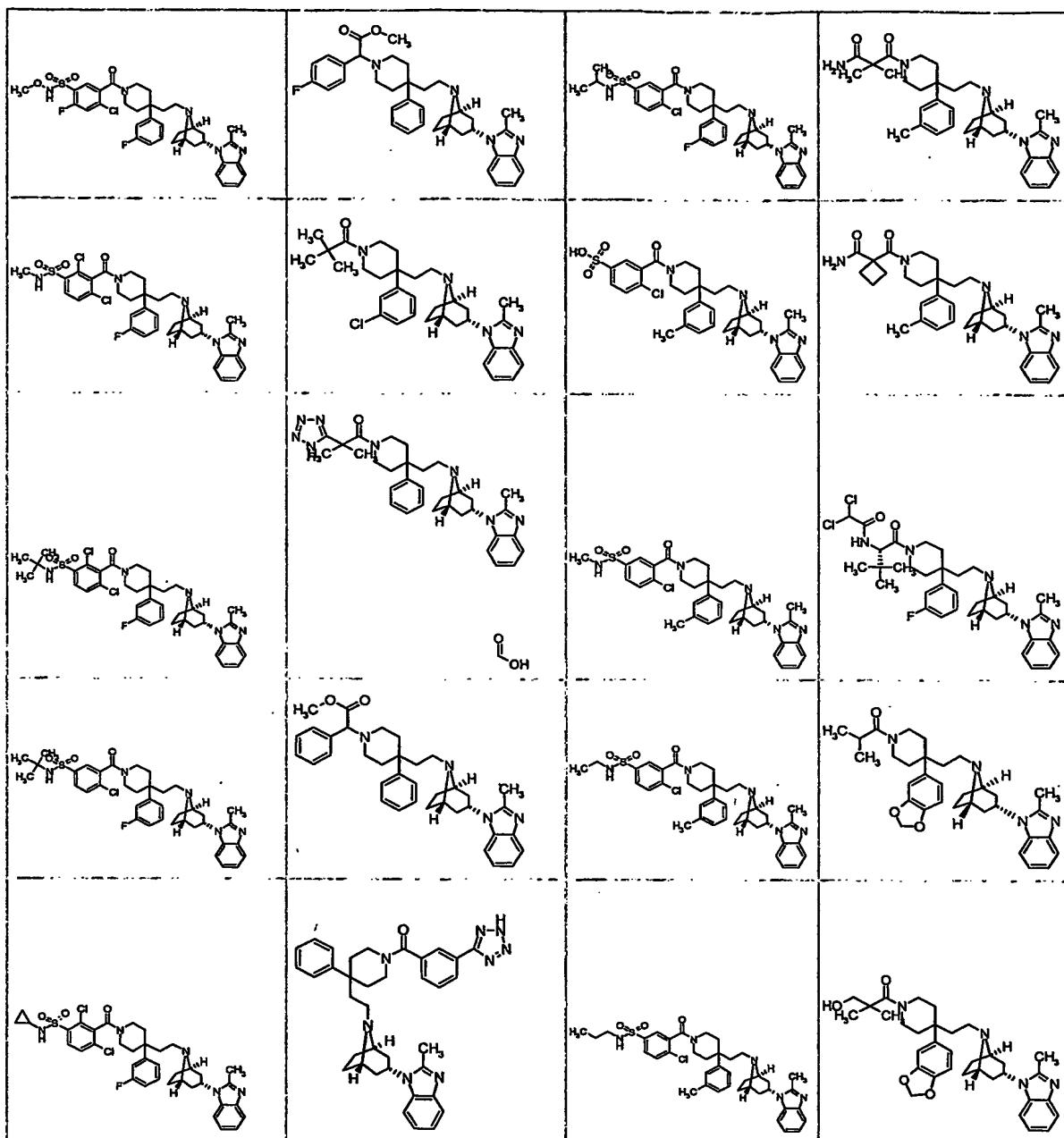


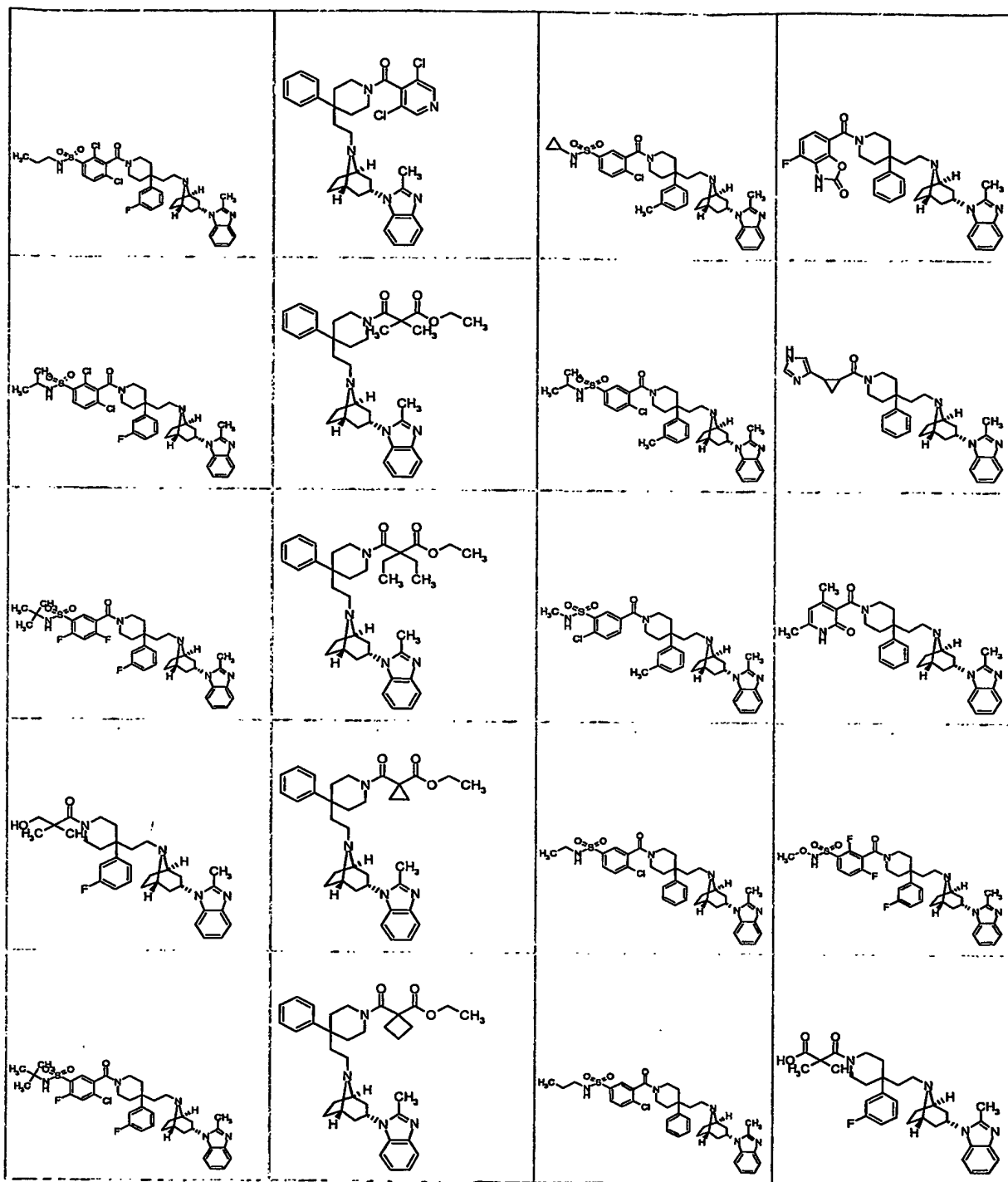


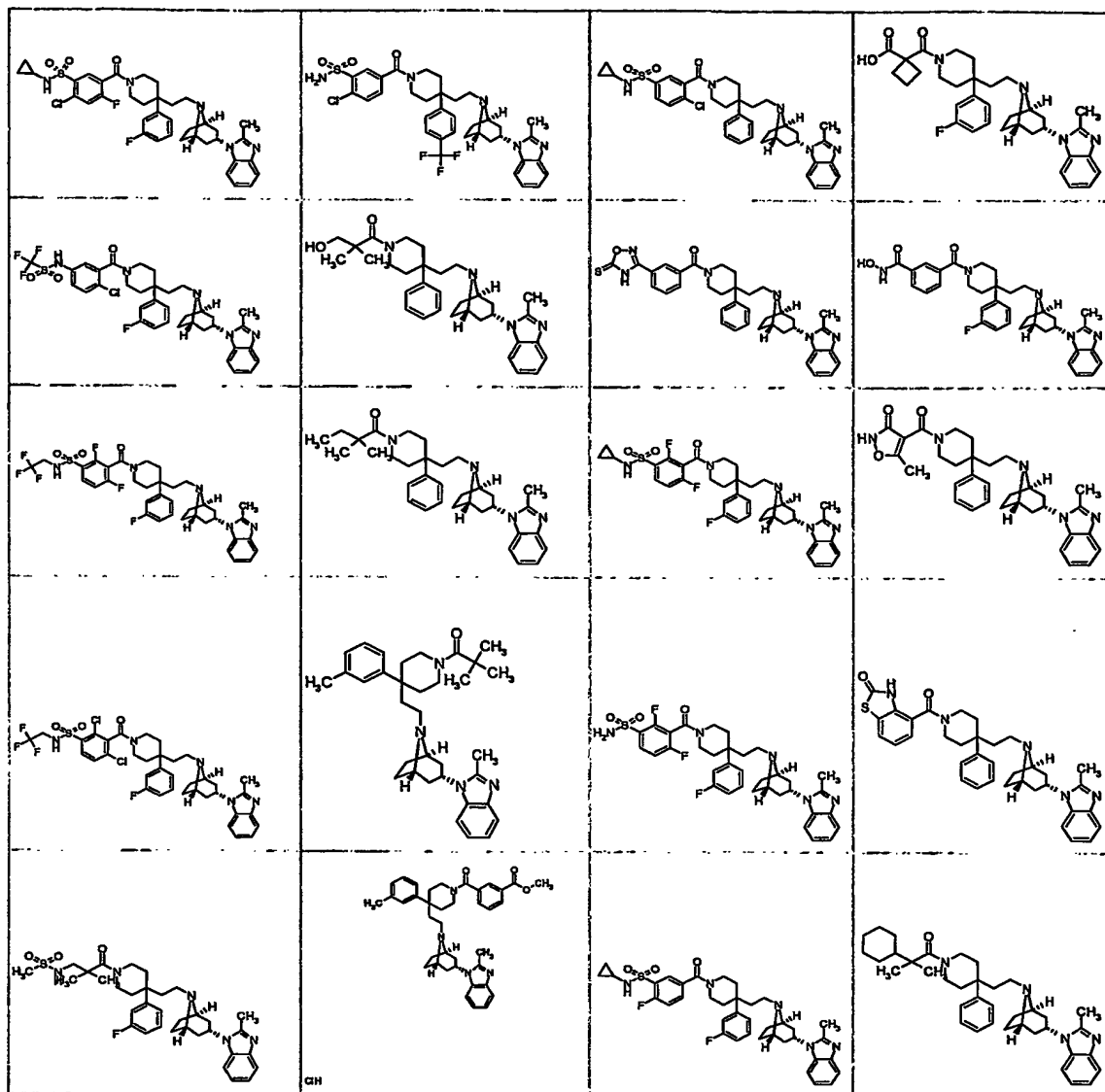


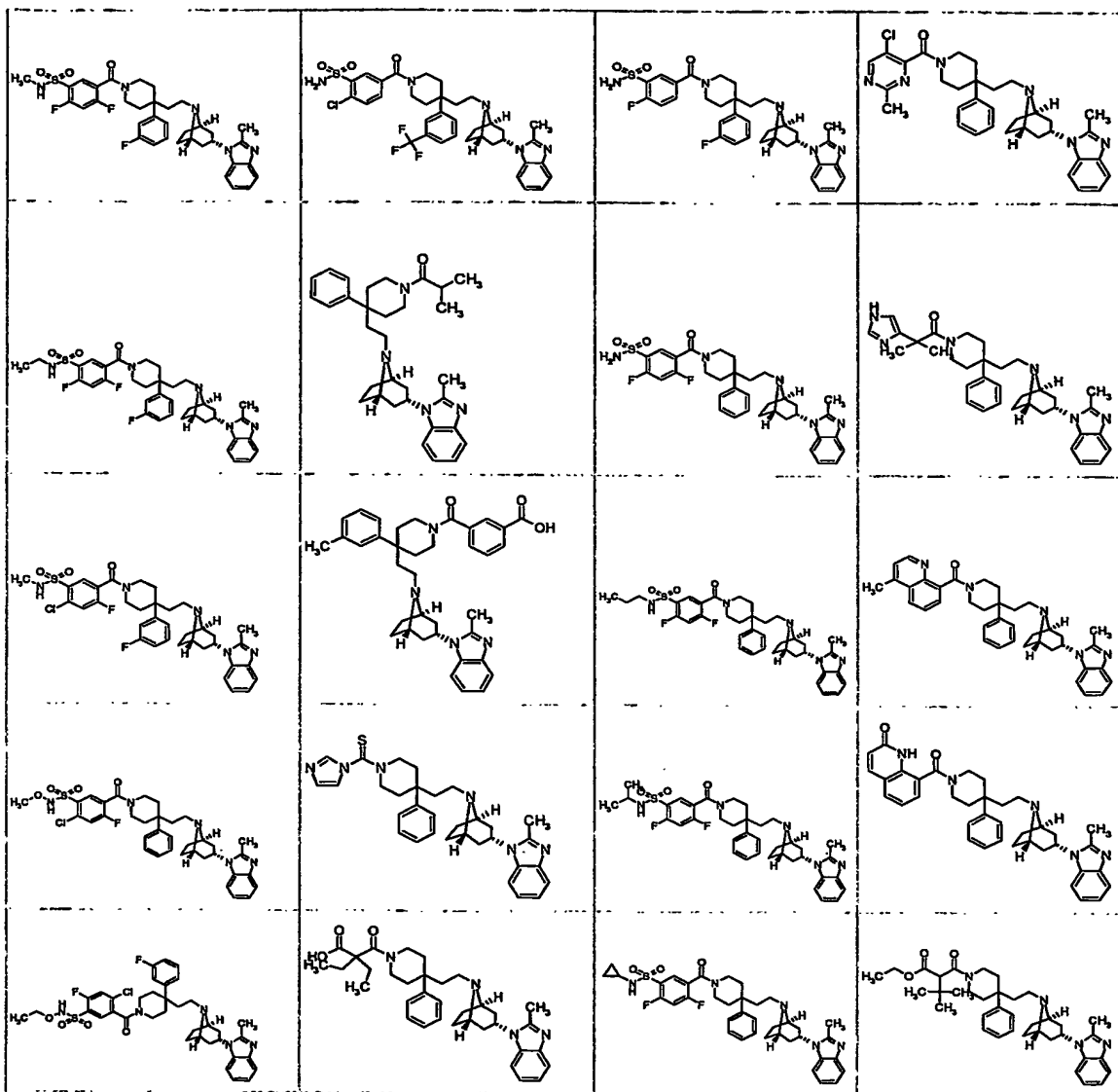


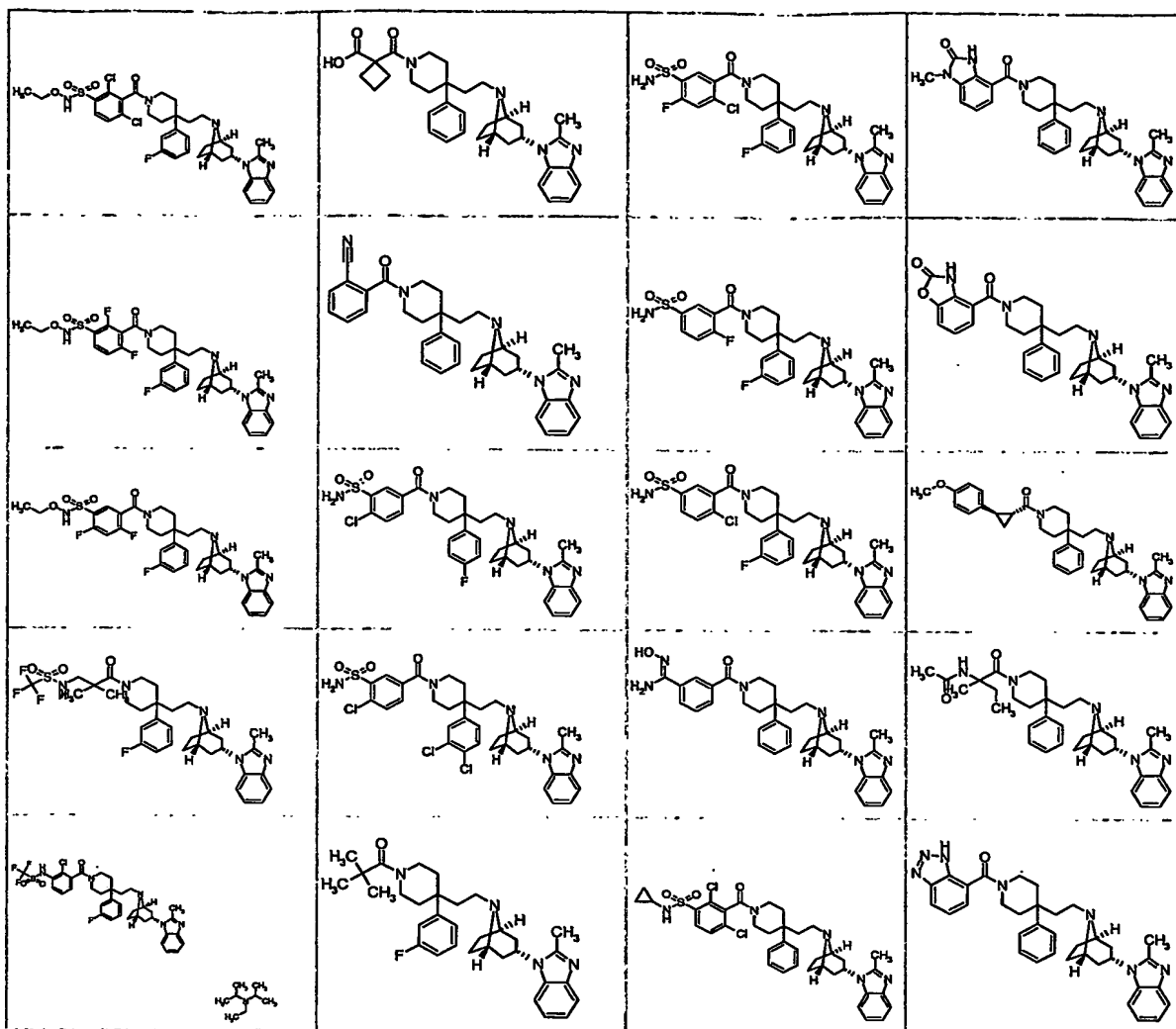




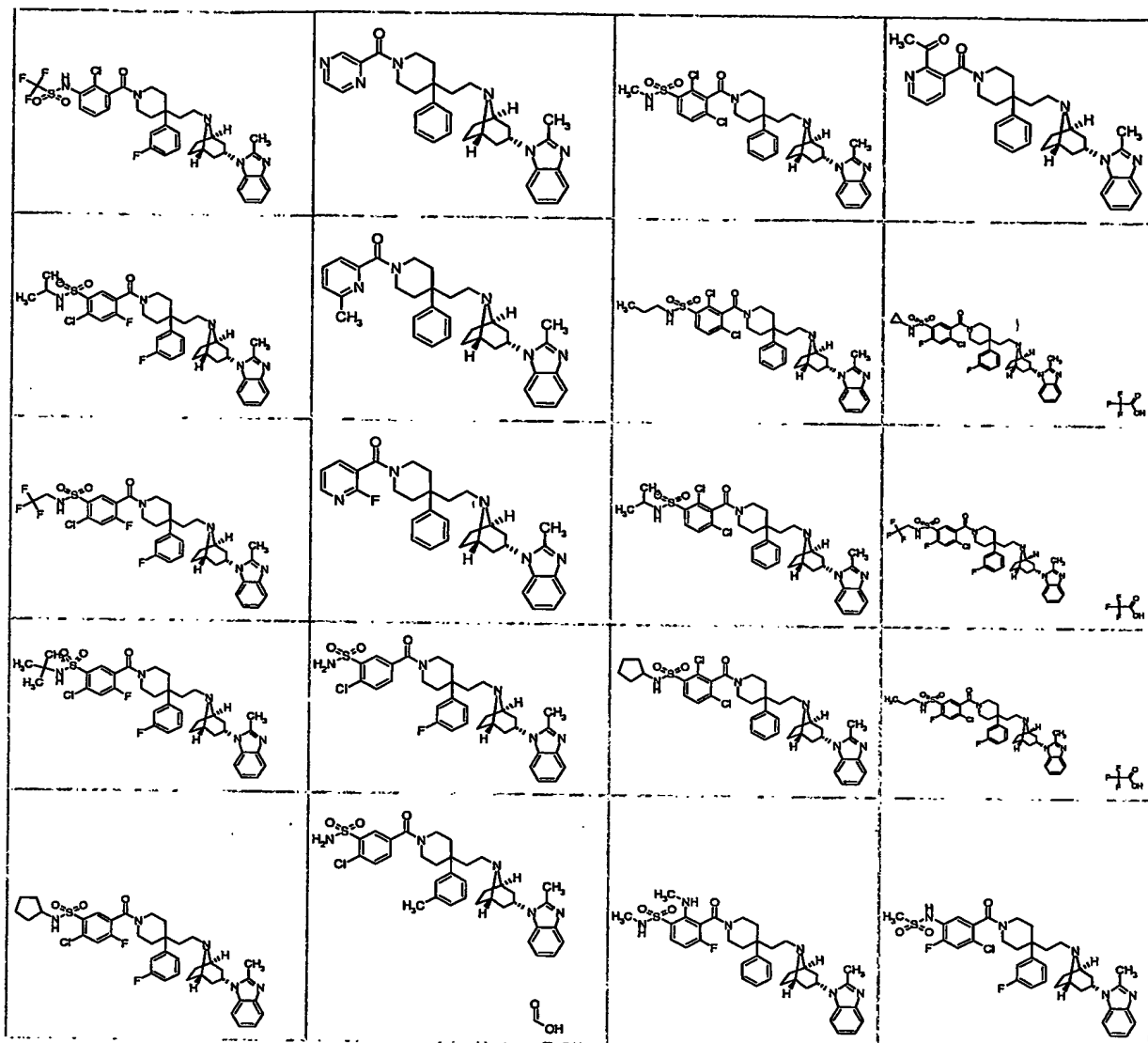


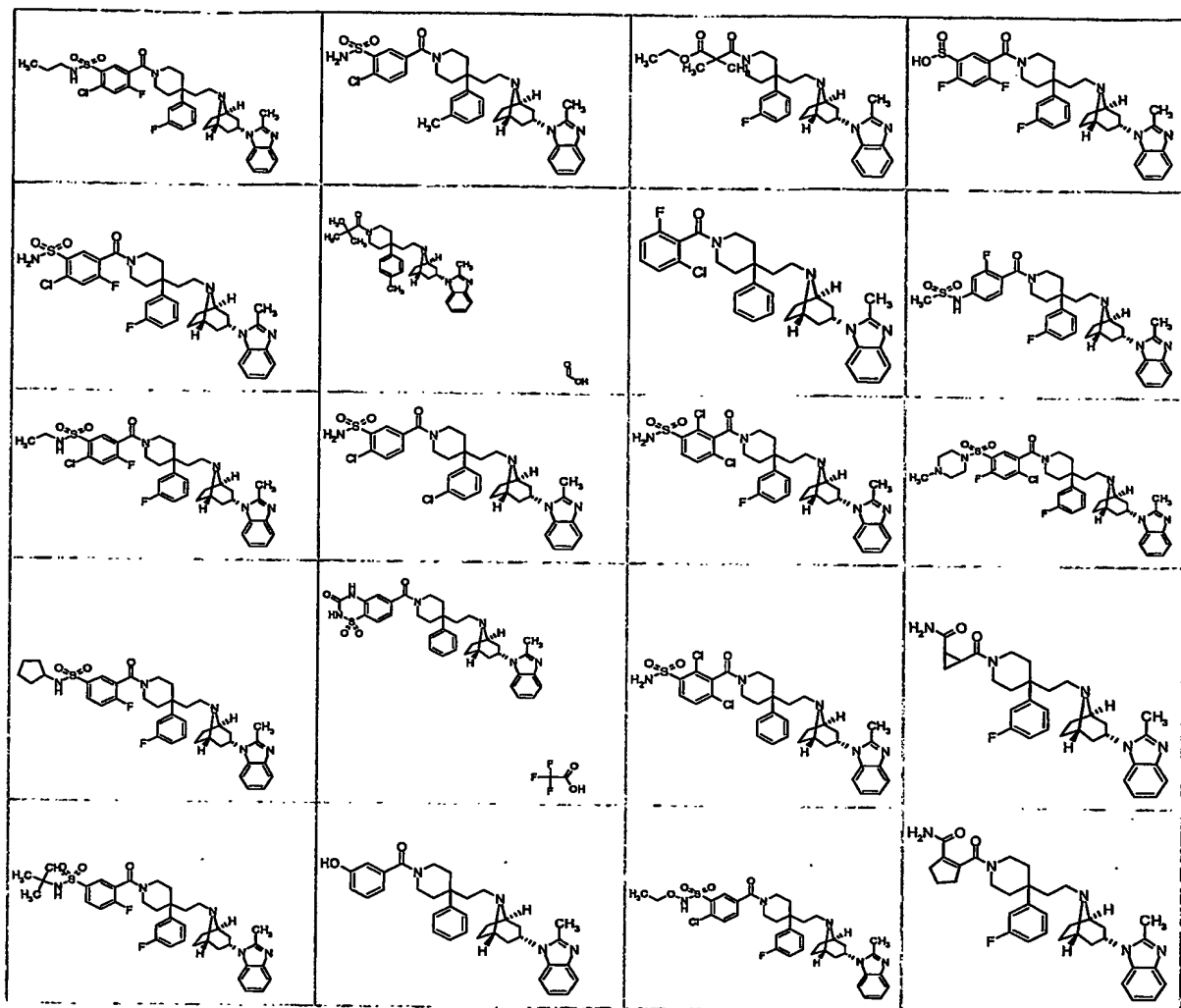


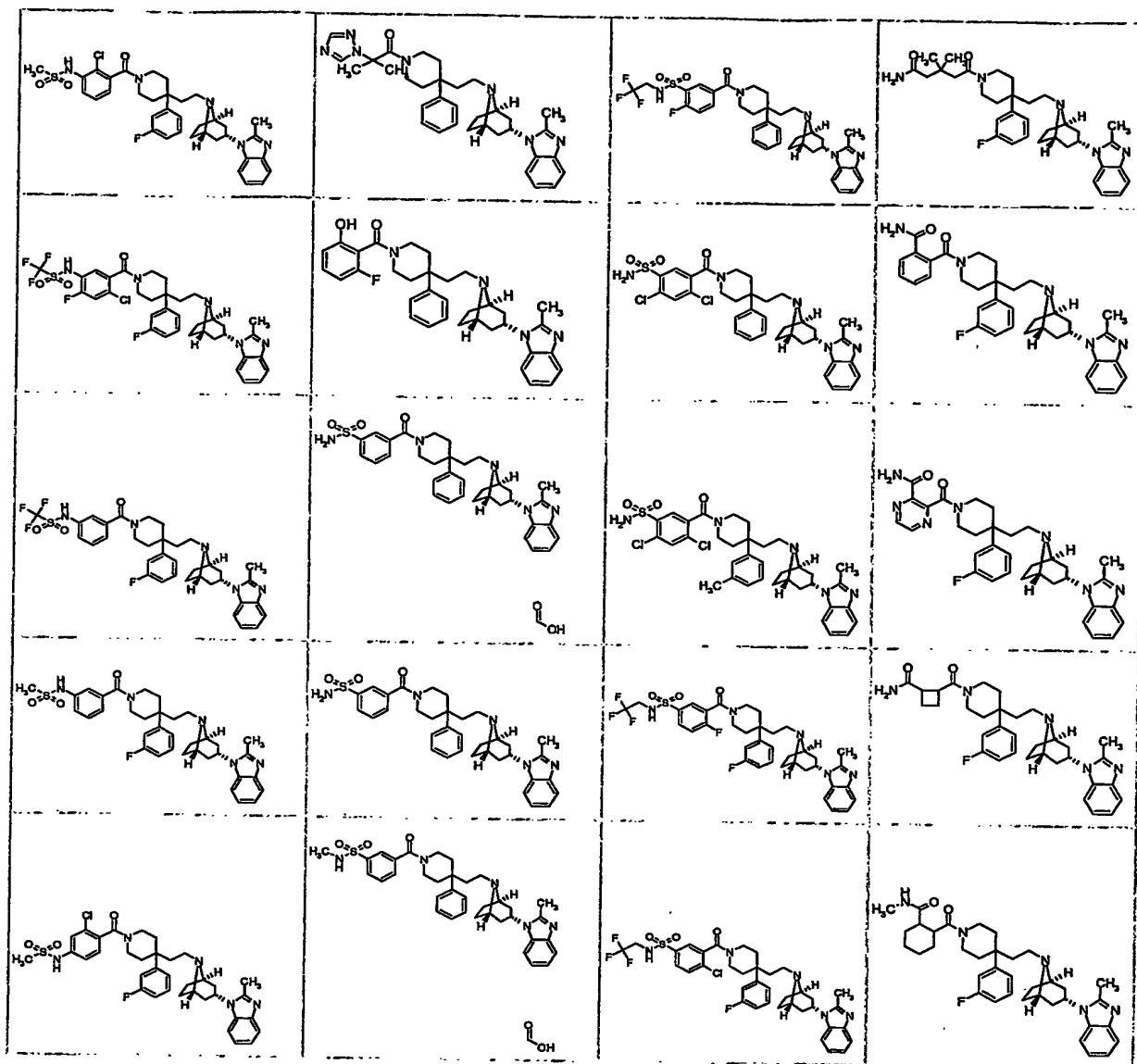




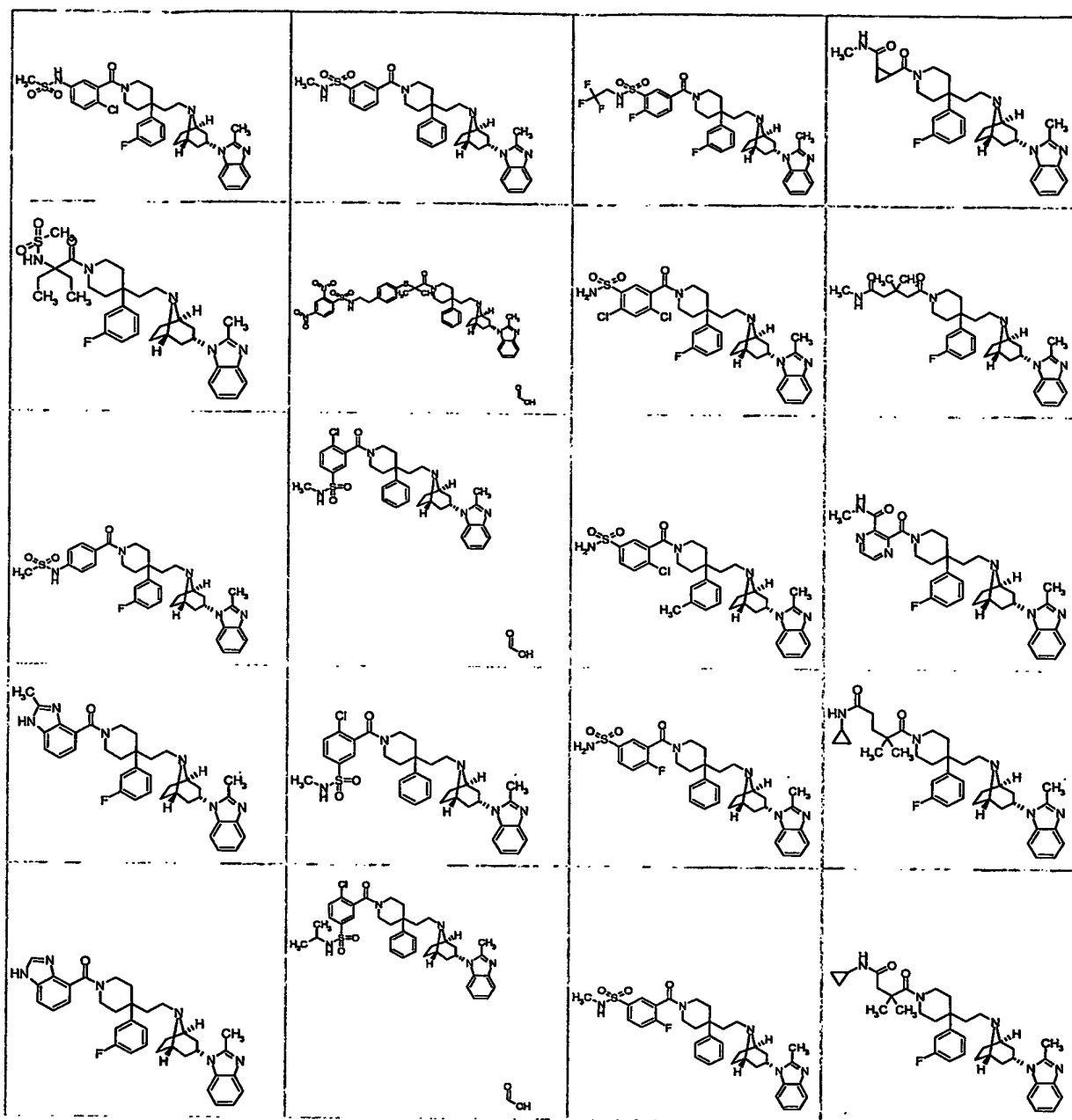
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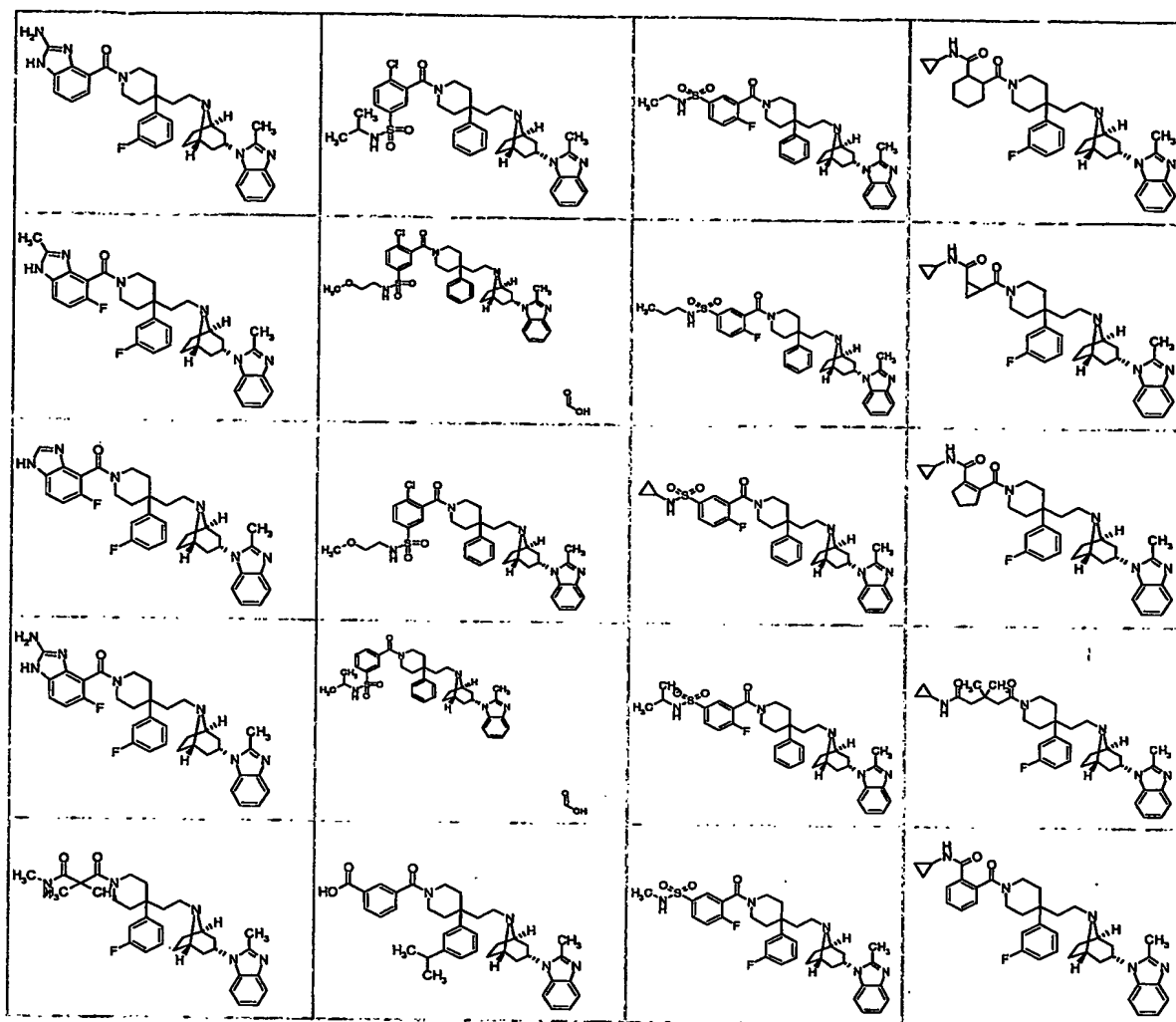




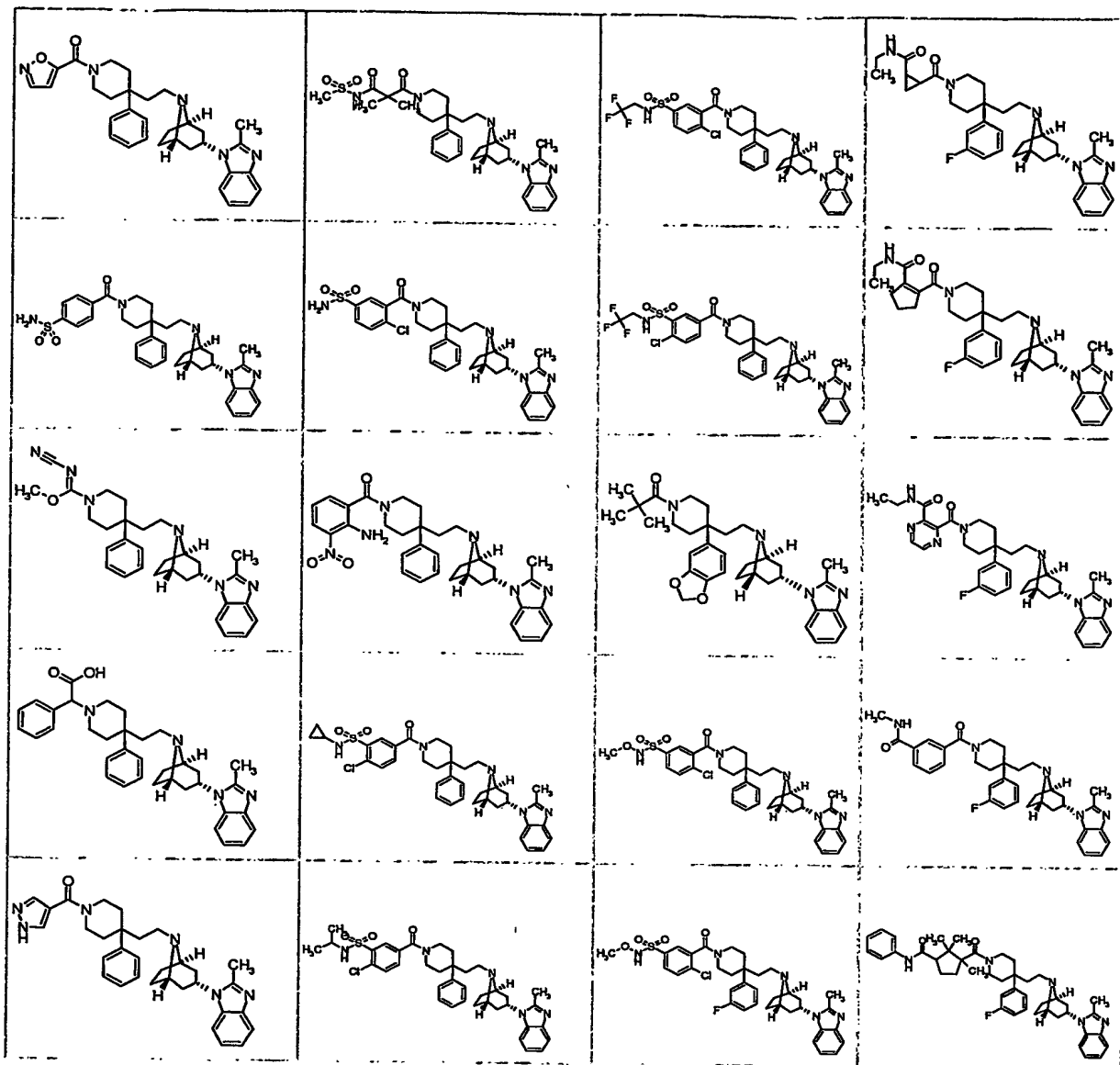


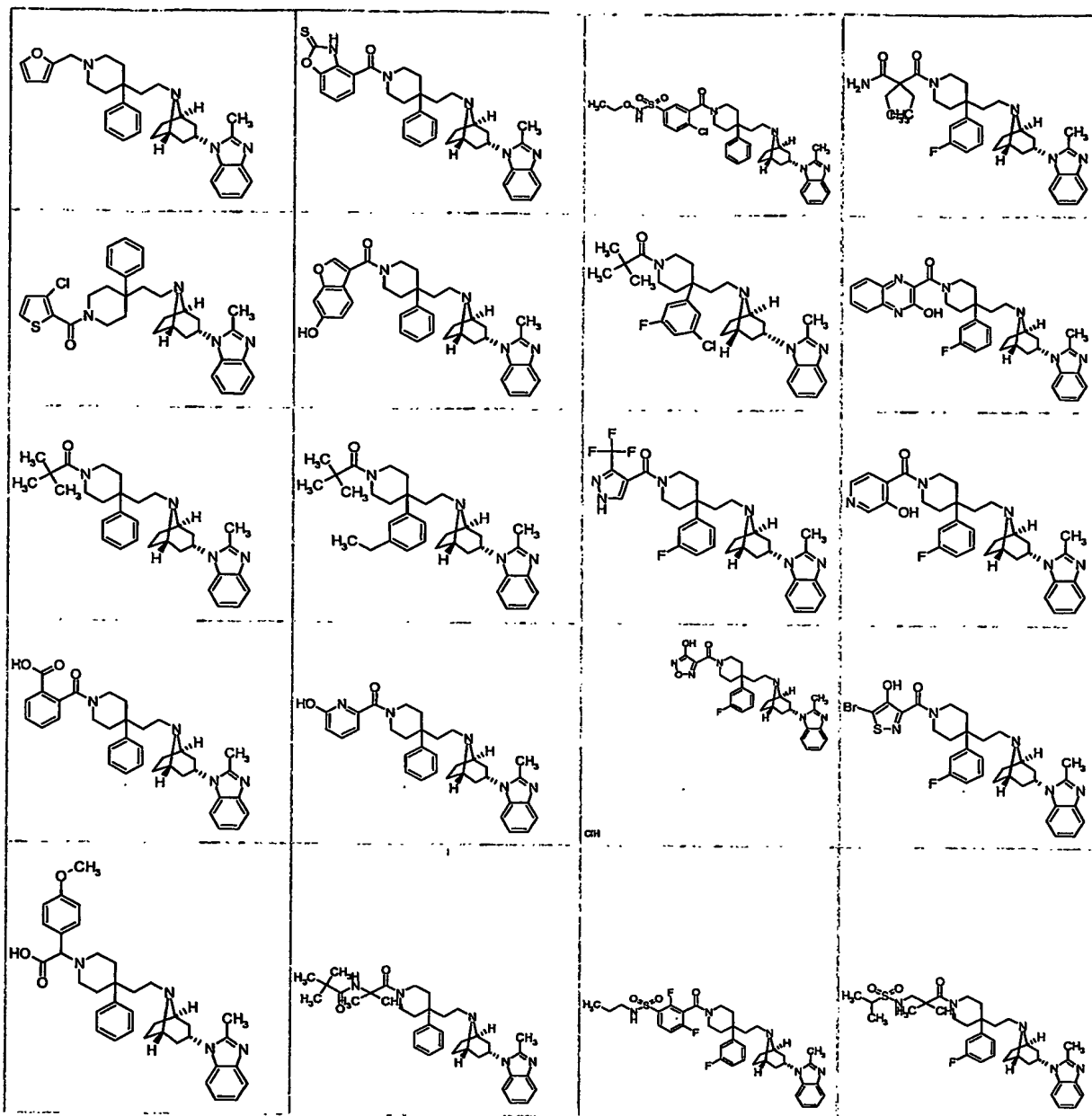


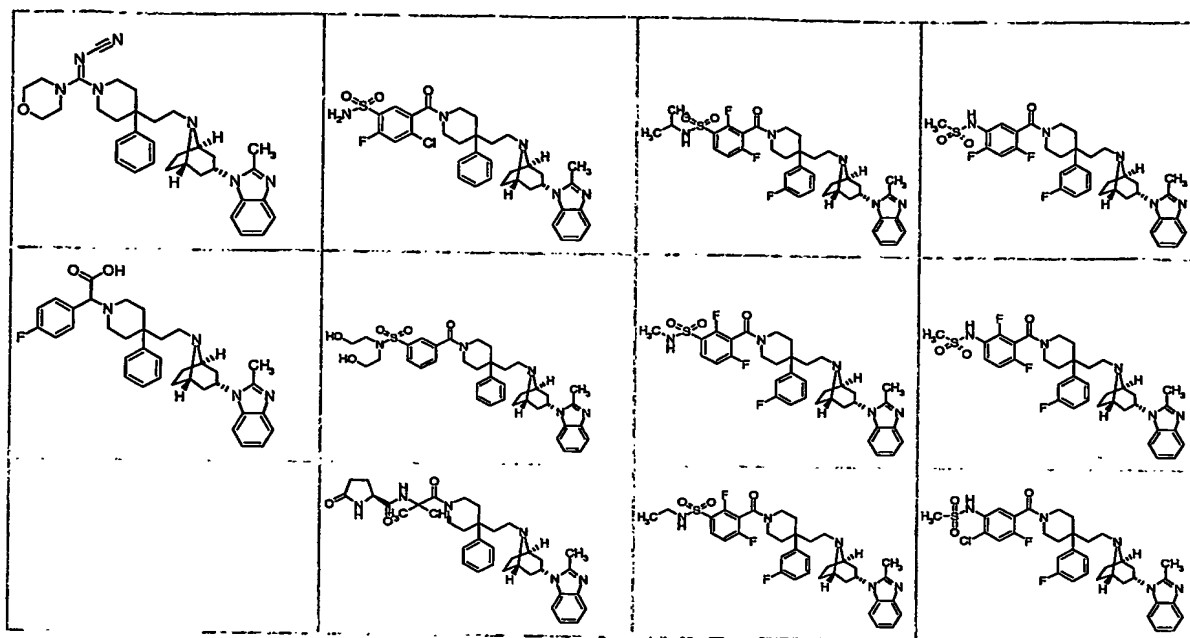












25. A composition comprising a compound according to Claim 1 and a pharmaceutically acceptable carrier, adjuvant, or vehicle.
26. The composition according to claim 25 further comprising a second therapeutic agent.
27. The composition according to claim 25 in the form of a tablet or capsule.
28. The composition according to claim 25 in the form of a liquid.
29. The composition according to claim 26, wherein said second therapeutic agent is chosen from (1-alpha, 2-beta, 3-alpha)-9-[2,3-bis(hydroxy methyl)cyclobutyl]guanine [(-)BHCG, SQ-34514, lobucavir], 9-[(2R,3R,4S)-3,4-bis(hydroxy methyl)-2-oxetanosyl]adenine (oxetanocin-G), acyclic nucleosides, ribonucleotide reductase inhibitors, nucleoside reverse transcriptase inhibitors, protease inhibitors, interferons, renal excretion inhibitors, nucleoside transport inhibitors, immunomodulators, non-nucleoside reverse transcriptase inhibitors, glycoprotein 120 antagonists, cytokine antagonists, integrase inhibitors, and fusion inhibitors.
30. The composition according to claim 29, wherein said acyclic nucleoside is chosen from acyclovir, valaciclovir, famciclovir, ganciclovir, penciclovir, acyclic nucleoside phosphonates, (S)-1-(3-hydroxy-2-phosphonyl-methoxypropyl)cytosine (HPMPC), [[[2-(6-amino-9H-purin-9-yl)ethoxy]methyl]phosphinyld-ene]bis(oxymethylene)-2,2-dimethylpropanoic acid (bis-POM PMEA, adefovir dipivoxil), [[[1R)-2-(6-amino-9H-purin-9-yl)-1-methylethoxy]methyl]phosphonic acid (tenofovir) and (R)-[[2-(6-Amino-9H-purin-9-yl)-1-methylethoxy]methyl]phosphonic acid bis-(isopropoxycarbonyloxymethyl)ester (bis-POC-PPMA).
31. The composition according to claim 29, wherein said ribonucleotide reductase inhibitor is chosen from 2-acetylpyridine 5-[(2-chloroanilino)thiocarbonyl]thiocarbonohydrazone and hydroxyurea.

32. The composition according to claim 29, wherein said nucleoside reverse transcriptase inhibitor is chosen from 3'-azido-3'-deoxythymidine (AZT, zidovudine), 2',3'-dideoxycytidine (ddC, zalcitabine), 2',3'-dideoxyadenosine, 2',3'-dideoxyinosine (ddI, didanosine), 2',3'-didehydrothymidine (d4T, stavudine), (-)-beta-D-2,6-diamino purine dioxolane (DAPD), 3'-azido-2',3'-dideoxy thymidine-5'-H-phosphonate (phosphonovir), 2'-deoxy-5-iodo-uridine (idoxuridine), (-)-cis-1-(2-hydroxy methyl)-1,3-oxathiolane 5-yl)-cytosine (lamivudine), cis-1-(2-(hydroxymethyl)-1,3-oxathiolan-5-yl)-5-fluorocytosine (FTC), 3'-deoxy-3'-fluorothymidine, 5-chloro-2',3'-dideoxy-3'-fluorouridine, (-)-cis-4-[2-amino-6-(cyclopropylamino)-9H-purin-9-yl]-2-cyclopentene-1-methanol (abacavir), 9-[4-hydroxy-2-(hydroxymethyl)but-1-yl]-guanine (H2G), and ABT-606 (2HM-H2G) ribavirin.

33. The composition according to claim 29, wherein said protease inhibitor is chosen from indinavir, ritonavir, nelfinavir, amprenavir, saquinavir, fosamprenavir, (R)-N-tert-butyl-3-[(2S,3S)-2-hydroxy-3-N-[(R)-2-N-(isoquinolin-5-yloxyacetyl) amino-3-methylthiopropionyl]amino-4-phenylbutanoyl]-5,5-dimethyl-1,3-thiazolidine-4-carboxamide (KNI-272), 4R-(4alpha,5alpha,6beta))-1,3-bis[(3-aminophenyl) methyl]hexahydro-5,6-dihydroxy-4,7-bis(phenylmethyl)-2H-1,3-diazepin-2-one dimethanesulfonate (mozenavir), 3-[1-[3-[2-(5-trifluoromethylpyridinyl)-sulfonylamino] phenyl]propyl]-4-hydroxy-6alpha-phenethyl-6beta-propyl-5,6-dihydro-2-pyranone (tipranavir), N'-[2(S)-Hydroxy-3(S)-[N-(methoxycarbonyl)-l-tert-leucylamino]-4- phenylbutyl-N<sup>alpha</sup>-(methoxycarbonyl)-N'-[4-(2-pyridyl)benzyl]-L-tert-leucylhydrazide (BMS-232632), 3-(2(S)-Hydroxy-3(S)-(3-hydroxy-2-methylbenzamido)-4-phenylbutanoyl)-5,5-dimethyl-N-(2-methylbenzyl) thiazolidine-4(R)-carboxamide (AG-1776), and N-(2(R)-hydroxy-1(S)-indanyl)-2(R)-phenylmethyl-4(S)-hydroxy-5-(1-(1-(4-benzo[b]furanylmethyl)-2(S)-N'-(tert-butylcarboxamido)piperazinyl)pentanamide (MK-944A).



34. The composition according to claim 29, wherein said interferon is  $\alpha$ -interferon.

35. The composition according to claim 29, wherein said renal excretion inhibitor is probenecid.

36. The composition according to claim 29, wherein said nucleoside transport inhibitor is chosen from dipyridamole, pentoxifylline, N-acetylcysteine (NAC), Procysteine,  $\alpha$ -trichosanthin and phosphono-formic acid.

37. The composition according to claim 29, wherein said immunomodulator is chosen from interleukin II, thymosin, granulocyte macrophage colony stimulating factors, erythropoietin, soluble CD<sub>4</sub> and genetically engineered derivatives thereto.

38. The composition according to claim 29, wherein said non-nucleoside reverse transcriptase inhibitor (NNRTI) is chosen from nevirapine (BI-RG-587),  $\alpha$ -((2-acetyl-5-methyl phenyl)amino)-2,6-dichlorobenzeneacetamide (loviride), 1-[3-(isopropyl amino)-2-pyridyl]-4-[5-(methane-sulfonamido)-1H-indol-2-ylcarbonyl]piperazine monomethanesulfonate (delavirdine), (10R, 11S, 12S)-12-hydroxy-6, 6, 10, 11-tetramethyl-4-propyl-11,12-dihydro-2H, 6H, 10H-benzo(1, 2-b:3, 4-b':5, 6-b'')tripyrans-2-one ((+) calanolide A), (4S)-6-chloro-4-[1E]-cyclopropylethenyl)-3,4-dihydro-4-(trifluoro-methyl)-2(1H)-quinazolinone (DPC-083), (S)-6-chloro-4-(cyclopropylethynyl)-1,4-dihydro-4-(trifluoromethyl)-2H-3,1-benzoxazin-2-one (efavirenz, DMP 266), 1-(ethoxymethyl)-5-(1-methylethyl)-6-(phenylmethyl)-2,4(1H,3H)-pyrimidinedione (MKC-442), and 5-(3,5-dichlorophenyl)thio-4-isopropyl-1-(4-pyridyl)methyl-1H-imidazol-2-ylmethyl carbamate (capravirine).

39. The composition according to claim 29, wherein said glycoprotein 120 antagonist is chosen from PRO-2000, PRO-542, and 1,4-bis[3-[(2,4-

dichlorophenyl) carbonylamino]-2-oxo-5,8-disodiumsulfanyl]naphthalyl-2, 5-dimethoxyphenyl-1,4-dihydrazone (FP-21399).

40. The composition according to claim 29, wherein said cytokine antagonists is chosen from reticulose (Product-R), 1,1'-azobis-formamide (ADA), and 1,11-(1,4-phenylene bis(methylene))bis-1,4,8,11-tetraaza cyclotetradecane octahydrochloride (AMD-3100).

41. The composition according to claim 33, wherein said protease inhibitor is ritonavir.

42. A method of antagonizing a chemokine CCR-5 receptor activity in a patient in need thereof comprising administering to said patient a therapeutically effective amount of a composition according to claim 25.

43. A method of antagonizing a chemokine CCR-5 receptor activity in a biological sample, comprising contacting the biological sample with an effective amount of a compound according to Claim 1 or a composition according to claim 25.

44. A method of treating a viral infection in a patient comprising administering to said patient a therapeutically effective amount of a composition according to claim 25.

45. The method according to claim 44 wherein the viral infection is an HIV infection.

46. A method of treating of a viral infection in a patient comprising administering to said patient a therapeutically effective amount of a composition according to Claim 26.

47. The method according to claim 33 wherein the viral infection is an HIV infection.

48. A method of treating a disease or disorder selected from AIDS related complex, progressive generalized lymphadenopathy, Kaposi's sarcoma,

thromobocytopenic purpura, AIDS-related neurological conditions, multiple sclerosis, tropical paraperesis, anti-HIV antibody-positive, or HIV-positive conditions in a patient in need thereof comprising administering to said patient a therapeutically effective amount of a composition according to claim 25.

49. The method according to claim 48, wherein said disease or disorder is AIDS related complex, Kaposi's sarcoma or AIDS dementia.

50. A method of treating a disease or disorder selected from AIDS related complex, progressive generalized lymphadenopathy, Kaposi's sarcoma, thromobocytopenic purpura, AIDS-related neurological conditions, multiple sclerosis, tropical paraperesis, anti-HIV antibody-positive, or HIV-positive conditions in a patient in need thereof comprising administering to said patient a therapeutically effective amount of a composition according Claim 26.

51. The method according to claim 50, wherein said disease or disorder is AIDS related complex, Kaposi's sarcoma or AID dementia.

52. A method of treating or preventing multiple sclerosis, rheumatoid arthritis, autoimmune diabetes, chronic implant rejection, asthma, rheumatoid arthritis, Crohns Disease, inflammatory bowel disease, chronic inflammatory disease, glomerular disease, nephrotoxic serum nephritis, kidney disease, Alzheimer's Disease, autoimmune encephalomyelitis, arterial thrombosis, allergic rhinitis, arteriosclerosis, Sjogren's syndrome, systemic lupus erythematosus, graft rejection, cancers with leukocyte infiltration of the skin or organs, human papilloma virus infection, prostate cancer, wound healing, amyotrophic lateral sclerosis, immune-mediated disorders, or bacterial infections in a patient in need thereof comprising administering to said patient a therapeutically effective amount of a composition according to claim 25.

53. A method of treating or preventing multiple sclerosis, rheumatoid arthritis, autoimmune diabetes, chronic implant rejection, asthma, rheumatoid arthritis, Crohns Disease, inflammatory bowel disease, chronic inflammatory disease, glomerular disease, nephrotoxic serum nephritis, kidney disease, Alzheimer's Disease, autoimmune encephalomyelitis, arterial thrombosis, allergic rhinitis, arteriosclerosis, Sjogren's syndrome (dermatomyositis), systemic lupus erythematosus, graft rejection, cancers with leukocyte infiltration of the skin or organs, human papilloma virus infection, prostate cancer, wound healing, amyotrophic lateral sclerosis or immune-mediated disorders in a patient in need thereof comprising administering to said patient a therapeutically effective amount of a composition according to Claim 26.

54. A compound according to any one of claims 1-24 for use in medical therapy.

55. Use of a compound according to any one of claims 1-24 in the manufacture of a medicament for the treatment of a viral infection.

56. The use according to claim 55 wherein the viral infection is an HIV infection.

57. Use of a compound according to any one of claims 1-24 in the manufacture of a medicament for the treatment or prophylaxis of a disease or disorder selected from AIDS related complex, progressive generalized lymphadenopathy, Kaposi's sarcoma, thrombocytopenic purpura, AIDS-related neurological conditions, multiple sclerosis, tropical paraperesis, anti-HIV antibody-positive, and HIV-positive conditions.

58. The use according to claim 57 wherein said disease or disorder is AIDS related complex, Kaposi's sarcoma or AID dementia.

59. A use of a compound according to any one of claims 1-24 in the manufacture of a medicament for the treatment of multiple sclerosis,

rheumatoid arthritis, autoimmune diabetes, chronic implant rejection, asthma, rheumatoid arthritis, Crohns Disease, inflammatory bowel disease, chronic inflammatory disease, glomerular disease, nephrotoxic serum nephritis, kidney disease, Alzheimer's Disease, autoimmune encephalomyelitis, arterial thrombosis, allergic rhinitis, arteriosclerosis, Sjogren's syndrome, systemic lupus erythematosus, graft rejection, cancers with leukocyte infiltration of the skin or organs, human papilloma virus infection, prostate cancer, wound healing, amyotrophic lateral sclerosis or immune-mediated disorders.

60. The use according to any one of claims 55-59, said medicament further comprises a second therapeutic agent.

61. The use according to claim 60 wherein said second therapeutic agent is chosen from (1-alpha, 2-beta, 3-alpha)-9-[2,3-bis(hydroxy methyl)cyclobutyl] guanine [(-)BHCG, SQ-34514, lobucavir], 9-[(2R,3R,4S)-3,4-bis(hydroxy methyl)-2-oxetanosyl]adenine (oxetanocin-G), acyclic nucleosides, ribonucleotide reductase inhibitors, nucleoside reverse transcriptase inhibitors, protease inhibitors, interferons, renal excretion inhibitors, nucleoside transport inhibitors, immunomodulators, non-nucleoside reverse transcriptase inhibitors, glycoprotein 120 antagonists, cytokine antagonists, integrase inhibitors, and fusion inhibitors.

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